

February 28, 2017

WNYFFS February 2017 Update

### Indoor Flying

Two more indoor sessions remain, in March, for the 2016/17 season. Check out the [wnyffs.org](http://wnyffs.org) for particulars.

WNYFFS has supported the aviation related Science Olympiad competition for a good many years. As usual, we ran the Wright Stuff completion for the High School level in January and just last weekend we were pleased to serve as judges for the Junior High competition. It seemed we might be shorthanded this year but we were pleasantly surprised when



Ed Currier from the Wayne Science Olympiad team volunteered his services. In addition, Saint John Fisher College provided 4 student volunteers throughout the day.

With all the help at hand running the show was much more relaxed affair than in years past. In the photo above, Ken Scott looks on while two competitors make

adjustments to their aircraft. Our other photo shows most of the judging team. Thanks to our student volunteers, Katie, Nakayla, Lily and Ed. In the last photo, one of the student competitors watches as his model settles in after an official flight.

### A bit more on Pop Off wings

Judging based on the number of replies, our introduction to pop off wings seemed to hit a chord. Harrison Knapp wrote in with a suggestion to add a bit of aluminized Mylar to one surface of the wing. That way, as the wing spins it will catch the sun and serve as a beacon to make it easier to track the falling model.

Jim Moseley wrote that a pop off wing is the only reliable way to bring down a P-30. Jim adds, a P-30 is about as large a ship as one would want to bring down with such an aggressive means. Here is a bit more from Jim: "I attach the retaining line to the extreme rear of the fuselage, with swivel; the other



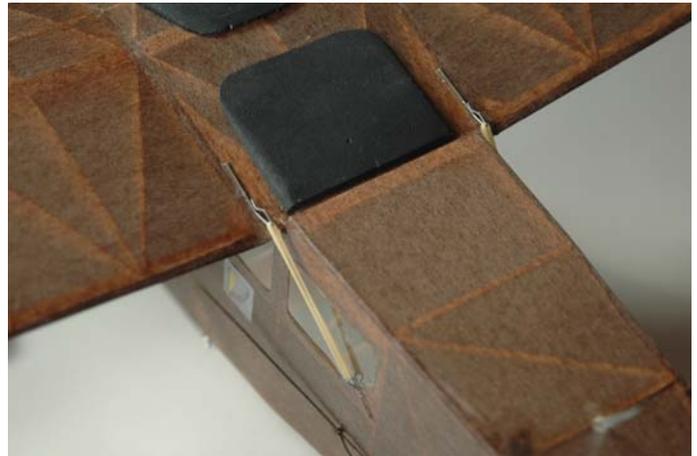
end clips to the trailing edge of the wing at the outer dihedral joint. During the descent the wing rotates rather like a sycamore seed (quite audibly, too) and though the fuselage is hanging nose down I've not experienced any damage on impact with the ground in several years of use." Thanks Jim. Jim is correct on all points and included the correct attachment point for the wing retaining line; that is the end of the wing. I would agree that with a rubber powered model there is very little risk of damage; however it is still convenient and functional to attach to the fuselage as shown last time.

With that introduction as an excuse, here is a bit more on pop up wing dethermalizers. The effect of a pop up wing is similar to a pop up tail but it has the advantage of allowing a solid



attachment of the tail. Typically, a wing has much more surface area in common with the fuselage than the tail. That means keying the wing is a bit easier and the retaining force is likewise spread over a larger area.

The photo at left shows the pop up wing as deployed on my Helio Stallion from Bill Henn's design. A very short length of monofilament keeps the wing from flipping off the model. Getting the line length correct is a little tricky. Too little and the model stalls in a series of dips, sometimes increasing in severity until your bird runs out of altitude. Too much and the model falls faster than one might find comfortable. Configuring a DT in this way is more sensitive than a popup tail. It is also somewhat difficult to hook up the wing restraining line since the gap between the wing and fuselage is fairly small. Last summer someone showed me a way to rig the restraining line over the wing so that all the fussy work was out in the open. That seems like it would be a lot easier and still allow removal of the wing for transportation and storage. Unfortunately I did not get a photo and do not recall the modeler's name.



The last image of the Stallion shows how the wing is retained at the trailing edge. A couple of cleverly made up hooks and a rubber band for each side nest the wing into a notch in the Stallions fuselage. If the model did not require a notch, a tongue as described last time would do as well. With a tongue, the rubber bands might not be needed but do some tests first.

As a parting shot on this topic, here is an image of an FA Moth which uses a pop off wing set up. This shows the tongue which holds the rear of the wing to the fuselage. The tongue is made of 1/32 inch plywood; it is glued to the bottom of the wing's trailing edge. On the Moth's fuselage, the first crosspiece behind the wing is simply placed *on top of* the longerons so the tongue can slip underneath. Pretty hard to get much easier than that. Some additional balsa is used to fair the cross piece into the longeron.

#### Science Exploration Days at Saint John Fisher College

In addition to the Science Olympiad, WNYFFS regularly participates in the local Science Exploration Days. This is a great chance to get out and meet the public and demonstrate our indoor flying models. Bob Clemens has been the contact for this event for many years. This year's event will be in May. If you are interested in joining in, contact Bob at [rclemens2@rochester.rr.com](mailto:rclemens2@rochester.rr.com)



That's all for now.

Build light, build straight and fly often,  
Mark C. Rzacca, Editor, Western New York Free  
Flight Society Thermal Journal

#### Outdoor Free Flight Dates at NWM Flying for 2017:

Spring Opener:	May 6 & 7
Spring Opener Rain Date:	May 20 & 21
FAC Outdoor Nationals:	July 19 ~ 22
Empire State Free Flight Championships:	August 11, 12 & 13
Pirate Challenge:	August 25, 26 & 27
Great Grape Gathering:	September 8, 9 & 10