Seattle Chapter News

Seattle Chapter IPMS/USA
November 2018

PREZNOTES

Do We Really Know What We Want in Life?

The theory behind one person, one vote, and basic democracy is that the individual knows what's best for themselves.

Standard liberal economic theory argues that a free market is best, with individual actors being left to their own devices as to what to spend their money on. But what about in the market for model kits? Do folks really know what is best for themselves?

Years ago, modelers were harping on about "if only we could get individual track links" for our model tanks, and be done with these horrid poorly detailed rubber band tracks all the kit manufacturers give us. Bitch, moan, gnashing of teeth. So along comes Dragon Models, with sprue after sprue of individual track links in each kit. Are we happy?

NOOOOOOOOOOOOO! We then started bitching that the track links provided had an ejection pin mark on each link, and each link was attached to the main sprue by four (or more!) attachment points, each of which needs cleaning up before the links are glued one to another. After a while, Dragon gave us "Magic Tracks" which came already off the sprue in little baggies, no ejection pin mark, ready to glue together. Then folks started to actually try to put all these individual track links together, and low and behold, it takes "forever". So, some folks started bitching about "why can't we have the old rubber band style tracks, but with LOTS of detail"? For a brief period Tamiya actually started providing both rubber band tracks AND link and length individual tracks in the same kit! It's tough trying to meet the modeling public's desires when they really don't know what they want…

Fast forward into the 21st Century, and one starts to hear folks demanding more "interior detail". Initially, producers of tank model kits might have provided the modeler with some rudimentary driver position and turret main gun breach detail. This was so if the modeler left the hatches open, you didn't just see a hollow void through the openings. But before long, folks started saying they wanted "full interior" kits, spare nothing. You can now get "full interior" kits from MiniArt Models, Rye Field Models, Dragon Models, Takom, Meng, etc. Having built four MiniArt Model kits of the T-54/55 series of Soviet tanks with "full interiors", I can tell you each was a tour de force of parts, parts and did I mention parts. Upwards of 1,200 parts per kit on the best (worst?) of them. When you are done, your eyes ache and water after so many hours under the lights peering through Opti-Visors marveling at the detail as you progressed.

But where does this all get us? Well, for those who don't build models (just collect them), it is a golden age of modeling. Breathtaking detail, and kit after kit to drool over and plan for "the most detailed build yet". For those of us actually trying to put these kits together, you really have to wonder "what WERE we thinking when we thought such kits were what we wanted"? IPMS Vancouver keeps detailed statistics on their model shows year after year. There is a clear trend. While the number of modelers entering each year has remained

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Public Disclaimers, Information, and Appeals for Help

This is the official publication of the Seattle Chapter, IPMS-USA. As such, it serves as the voice for our Chapter, and depends largely upon the generous contributions of our members for articles, comments, club news, and anything else involving plastic scale modeling and associated subjects. Our meetings are generally held on the second Saturday of each month, (see below for actual meeting dates), at the **North Bellevue Community/Senior Center, 4063-148th Ave NE**, in Bellevue. See the back page for a map. Our meetings begin at 10:00 AM, except as noted, and usually last for two to three hours. Our meetings are very informal, and are open to any interested modeler, regardless of interests. Modelers are encouraged to bring their models to the meetings. Subscriptions to the newsletter are included with the Chapter dues. Dues are $15 per annum, and may be paid to Twyla Birkbeck, our Treasurer. (See address above). We also highly recommend our members join and support IPMS-USA, the national organization. See below for form. Any of the members listed above will gladly assist you with further information about the Chapter or Society.

The views and opinions expressed in this newsletter are those of the individual writers, and do not constitute the official position of the Chapter or IPMS-USA. You are encouraged to submit any material for this newsletter to the editor. He will gladly work with you and see that your material is put into print and included in the newsletter, no matter your level of writing experience or computer expertise. The newsletter is currently being edited using a PC, and PageMaker 6.5. Any Word, WordPerfect, or text document for the PC would be suitable for publication. Please do not embed photos or graphics in the text file. Photos and graphics should be submitted as single, separate files. Articles can also be submitted via e-mail, to the editor's address above. Deadline for submission of articles is generally twelve days prior to the next meeting - earlier would be appreciated! Please call me at 425-885-3671 if you have any questions.

If you use or reprint the material contained in the newsletter, we would appreciate attribution both to the author and the source document. Our newsletter is prepared with one thing in mind; this is information for our members, and all fellow modelers, and is prepared and printed in the newsletter in order to expand the skills and knowledge of those fellow modelers.

Upcoming Meeting Dates

The IPMS Seattle 2018 meeting schedule is as follows. All meetings are from **10 AM** to **1 PM**, except as indicated. To avoid conflicts with other groups using our meeting facility, we must **NOT** be in the building before our scheduled start times, and **MUST** be finished and have the room restored to its proper layout by our scheduled finish time. We suggest that you keep this information in a readily accessable place.

November 10 **December 8**

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2019 NorthWest Scale Modelers Show: Save the Dates!

by Tim Nelson

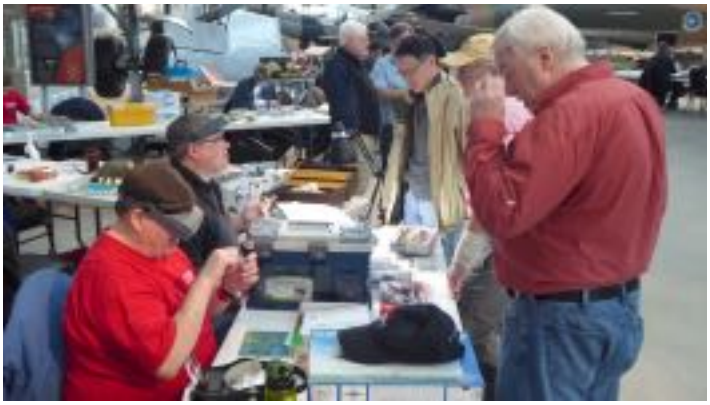
Mark your calendars now for the NorthWest Scale Modelers Show at The Museum of Flight in Seattle, a spectacular exhibition of modeling in a world class venue. Show dates are Presidents Day weekend, February 16-17. Block it out on your calendar right this minute.

As always, the centerpiece of the show is the massive display of YOUR models in the MoF Great Gallery. Bring lots of models to show off. Bring your latest, your oldest, your best, your worst – this is a showcase of all aspects and skill levels of scale modeling. Longtime, stalwart exhibitors and first-timers all welcome. Museum of Flight admission is FREE for exhibiting modelers.

There will be copious working tables for the public to see modelers in action; bring projects to work on. Eric Christianson is organizing a variety of cool seminars in the small neighboring theater; learn and share your knowledge. We have a Special Guest! Modeler and author Chris Bucholtz will be there both days to discuss his new P-47 book (*Thunderbolts Triumphant: The 362nd Fighter Group vs Germany's Wehrmacht*) – and show models!

This show is a pure exhibition, not a contest, so come enjoy a relaxing weekend immersed in your favorite hobby. Although the main model show is organized simply by modeler, we will have two special group displays: 75th Anniversary of D-Day (Jim Bates coordinating) and Air Racing/Record-Setting (John Newcome coordinating).

More details to follow. If any questions at this early stage, please contact Tim Nelson (e-mail: **timndebn@comcast.net**) or Jim Bates (**rcaflawyerpilot@gmail.com**). See you under the Blackbird in February!



Wingnut Wings 1/32nd Scale Sopwith Camel (Clerget)

text and photos by Tim Nelson

I'm a committed 1/72nd builder (or should be committed) when it comes to aircraft modeling. My main interests are civil aviation between the wars, and experimental/research aircraft of all eras. I do occasionally dabble in World War I subjects, where the cratered 1/72nd landscape is mostly occupied by decent Roden and Eduard kits, sketchy offerings from further east in Europe, and vintage Revell. There are the occasionally sublime but challenging resin gems from Ardpol and Choroszy, but many of the choices are - let's face it - craptacular.

I've been following the efforts of Wingnut Wings since their debut about ten years back, and have marveled at kits shown to me by others. The upcoming November 2018 centenary of the end of the Great War got me thinking about treating myself to at least one Wingnut Wings kit experience, accepting on a temporary basis that I would have to tread into my previous No Man's Land of 1/32nd scale. The fact that one of our local Seattle clubs, NorthWest Scale Modelers, would stage a World War I display in The Museum of Flight lobby added to the motivation.

The next question to ponder was what subject? Many of the early Wingnut offerings have sold out, although some can be obtained for a king's ransom on eBay. Thinking back on my 2016 trip to the UK, and inspiration found at Hendon and the Shuttleworth Collection, I began to focus on British types. What better choice than the iconic Sopwith Camel, the most famous and successful of all Allied fighters? That choice made, the next choice was which Camel? Wingnut offers several Camel/engine combinations and I elected to build the single most accomplished Camel of all, William Barker's B6313, one of the configurations offered in kit #32074.

The Sopwith Camel owns a rightful place in the pantheon of great aircraft. Along with the S.E.5 and French SPAD S.VII and S.XIII, it gained air superiority for the Allies over the Western Front in mid-1917. Designed for two synchronized Vickers machine guns, it addressed the biggest shortcoming of its predecessors, the single-gunned 1-½ Strutter, Pup, and Triplane. It flew with multiple engine types in a variety of roles, including a naval version which pioneered aircraft carrier operations. Its concentration of mass around the pilot, combined with strong rotary engine gyroscopic effects, made it a tricky aircraft to fly, but in the hands of a skilled pilot it was most formidable. The Camel accounted for more aerial victories than any other Allied type.

Hailing from Manitoba, William George Barker is the most decorated soldier in Canadian history. His military career began in late 1914 as an enlisted man. Sent to France in late 1915, he soon became a Royal Flying Corps B.E.2 gunner/observer and officer. In late 1916, he began pilot training and proved to be an aggressive airman and excellent marksman. After a stint as an observer pilot, he was assigned to 28 Squadron in September 1917, where his year-long Sopwith Camel odyssey began. Flying mostly in Italy, with 28, 66, and 139 Squadrons successively, Barker took B6313 with him, a highly unusual thing. Following reassignment as a training commander in England in September 1918, he worked his way to France for a further taste of combat. He was awarded the Victoria Cross for his epic engagement with 15+ Fokker D.VIIs over the Western Front on 27 October, 1918, while flying a Sopwith Snipe; while receiving grave injuries which almost proved fatal, he downed four enemy aircraft. He ended the war with 50 official victories, including aircraft and balloons. Barker never fully recovered from his injuries, but he pursued an aviation business and military career in postwar Canada. He was tragically killed at the age of 35 while demonstrating a Fairchild KR-21 in 1930.

Barker's Camel B6313 is the most successful aircraft in Royal Flying Corps/Royal Air Force history, with 46 aerial victories credited to it at Barker's hand. It is likely the most successful single combat aircraft of all time in any service, and certainly not likely to be surpassed. This storied Camel was unfortunately not preserved and was unceremoniously broken up when retired.

Fellow Northwest modeler Russ Bucy has modeled B6313 at the beginning and end of Barker's association with it, creating fine builds from the daunting Hobbycraft kit, chronicled here[1].

My build targets B6313 in the middle of this period, when he was assigned to 139 Squadron. The aircraft is often shown in profile art with a black nose and decking, but this is likely a trick of light and photography. Contemporary accounts describe a PC10 gloss applied in these areas, similar in color to the basic PC10 fuselage but darker to the eye due to gloss and reflectivity; thus recommends Wingnut and I followed suit. Barker's Camel received new wings in March 1918 following a deadstick landing accident, and was completely repainted in July 1918 when transferred to 139 Squadron. Wingnut suggests either PC10 (a greenish brown) or PC12 (a reddish brown) for the wings and I opted for PC12 to expand the color palette of the model a bit. Given that these colors varied significantly in the field, and with rapid fading and wear, I don't think it's a stretch.

Numerous detailed in-box reviews can be found on the web, for example here[2] and here[3] and here[4] and here[5]. We won't repeat those observations here, but I'll just confirm the Wingnut Camel kit is gorgeous, lovingly presented, and is accompanied by a thoroughly researched instruction manual that is a work of art all by itself. The Ray Rimell guidebook to the kit (see References) is a highly useful companion.

I was initially put off by the large number of ejector pin marks but after embarking on the build, I realized they are all strategically located to not be visible in the finished model. I thus did not bother to fill any of them. This is another example of thoughtful Wingnut attention to detail (a quality lacking in most 1/72nd WWI kits).

Wingnut kits go together well, but definitely require time and attention to do them justice. The instructions are very thorough, but not necessarily in optimum sequence when painting is considered. Carefully review the instructions and consider which areas need to be painted in advance, and which can be deferred. I painted almost everything in advance of final assembly.

You must choose from the start which configuration you're going to build because it will affect numerous decisions along the way. In the case of Barker's Camel, there were several unique features:

- Decking around the guns was cut away significantly, especially on the port (left) side
- The Aldis tube sight was removed
- A "red devil" talisman was mounted on the starboard Vickers gun, thoughtfully provided in photo-etched brass
- The aileron cable inspection windows on each wing appear to have been painted over

The cockpit assembly is its own miniature kit, accounting for the lion's share of the kit part count. It's a gorgeous piece of work, but much of it will be obscured in the completed model; however, you'll know it's there. Internal rigging was done with Uschi "Rig That Thing" Standard line.

I always look forward to getting past basic cleanup (of which there is very little here) and assembly, and moving on to painting. I have recently transitioned from many years of solvent-based painting to acrylics, and have adopted the delightful Mission Models Paint (MMP) line as my paint of choice. My Camel strategy was to follow Wingnut recommendations but there were still decisions to be made: 1) interpreting Wingnut Tamiya/ Humbrol callouts into an equivalent Mission color or blend and 2) choosing colors where the prototype coloring itself is not definitive. For the former, Wingnut's inclusion of equivalent FS number is a handy reference – and given that these colors have been debated for years and varied in realization, some "Kentucky windage" is appropriate. For the latter, the MMP choices and blends I used were as follows:

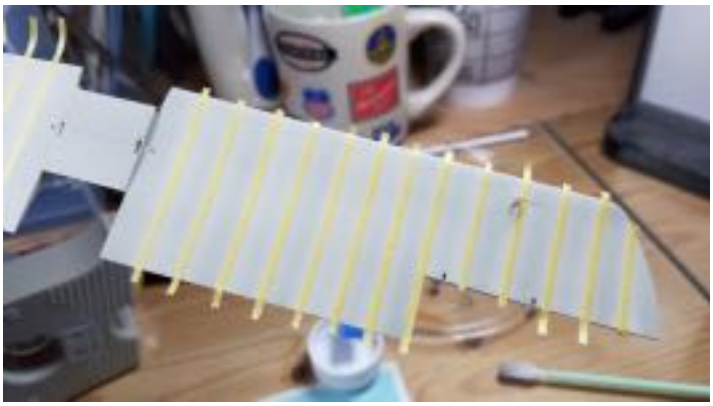
- Primer: Tan (MMS-006)
- Wicker (for pilot seat): 33% each Brown (MMP-002), Yellow (MMP-007), and White (MMP-001)
- Padding (pilot seat and coaming): 67% Rotbraun (MMP-012), 33% Red (MMP-003)
- Clear Doped Linen (CDL): German WWII Elfenbein (MMP-082)
- PC10 Light (fuselage): 75% U.S. Army Olive Drab (MMP-026), 25% Rotbraun (MMP-012)
- PC10 Gloss (cowl and decking): 67% U.S. Army Olive Drab (MMP-026), 33% Brown (MMP-002), plus a dot of Blue (MMP-048) and Red (MMP-003) (i.e., purple) for a bit of further darkening
- PC12: Rotbraun (MMP-012)
- Battleship Grey: Medium Gray (MMP-072) plus a skosh of Blue (MMP-048)
- All bare woods: Yellow (MMP-007) or Orange (MMP-005) undercoat followed by hand-brushed raw umber oil paint
- Engine metallics: exhaust manifold Silver (MMM-006), cylinders Duralumin (MMM-005), pushrods Alclad II White Aluminum. A wash of 40% Future, 40% water, 10% Brown (MMP-002), 10% Black (MMP-047) was applied to the cooling fins of the cylinders (this was noted in the Rimell Camel book, and works very well for this kind of use.)

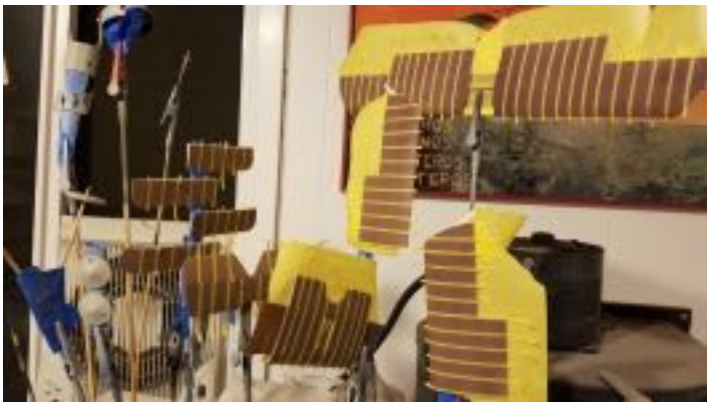
A gloss coat of Pledge Floor Gloss (PFG, famously known as "Future") followed in preparation for decal application. All of the above was airbrushed with a Harder and Steenbeck Infinity airbrush with 0.4 mm tip (with the exception of mottling discussed below, applied with 0.2 mm tip).

The Cartograf printed decals in general are superb. They incorporate exceptionally accurate cutouts where appropriate to fit irregular kit features. I elected not to use the fuselage stripe decals; I didn't see how they would ever conform to the elevator control line orifices, so I painted the stripes. I did have trouble getting the large wing roundels to lay down without bubbles. It required several iterations of hobby knife incisions and Micro Sol applications before the roundels sued for peace.

This model was an opportunity to apply more weathering than my usual civil subjects. However, photos of the prototype in July 1918 show a clean and well-maintained bird. Nevertheless, I dirtied it up where Camels tended to get messy; wing undersides, overall dusting, and general engine exhaust with castor oil staining. I did a bit of subtle preshading on the fuselage, although WWI subjects rarely exhibit much of this look. A little brown mottling on the wing undersides brought out an

understated distressed look in the CDL which would follow. Rib tapes were enhanced by masking after the initial paint passes, then completing the painting. Thin Transparent Dust 1 (MMW-006) blended things together. A thin mix of heavier brown/black was airbrushed in the wake of the Clerget exhaust, which tended to fling soot and castor oil along the underside, with a bias toward the port side due to engine rotation. A coat of Vallejo Satin was applied for appropriate sheen, carefully avoiding the glossy cowl and decking).





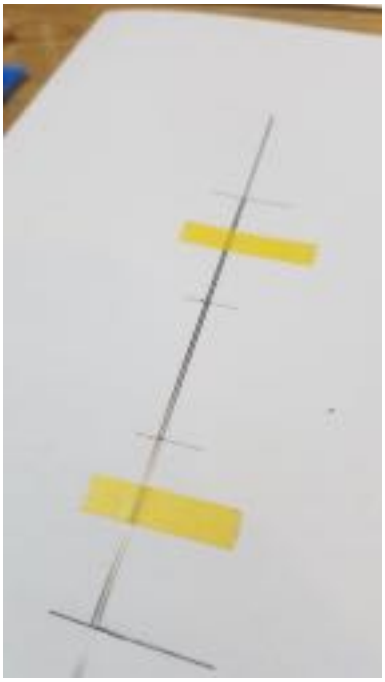
Now we come to that dreaded moment in almost every WWI build, when you must finally go "over the top" and face rigging the model. Rigging is certainly easier in general in 1/32nd scale than 1/72nd, simply due to greater size and working "elbow room". There are many ways to rig, depending on the characteristics of the prototype, and how much intrinsic strength the model possesses. The key in any rigging effort is to carefully study the prototype, identify and prepare anchor holes, and work PATIENTLY from the inside-out. Wingnut thoughtfully molded in many anchor recesses on the Camel, so I only added some depth and clearance (and remove paint buildup in places) to a few points to increase my margin for error.

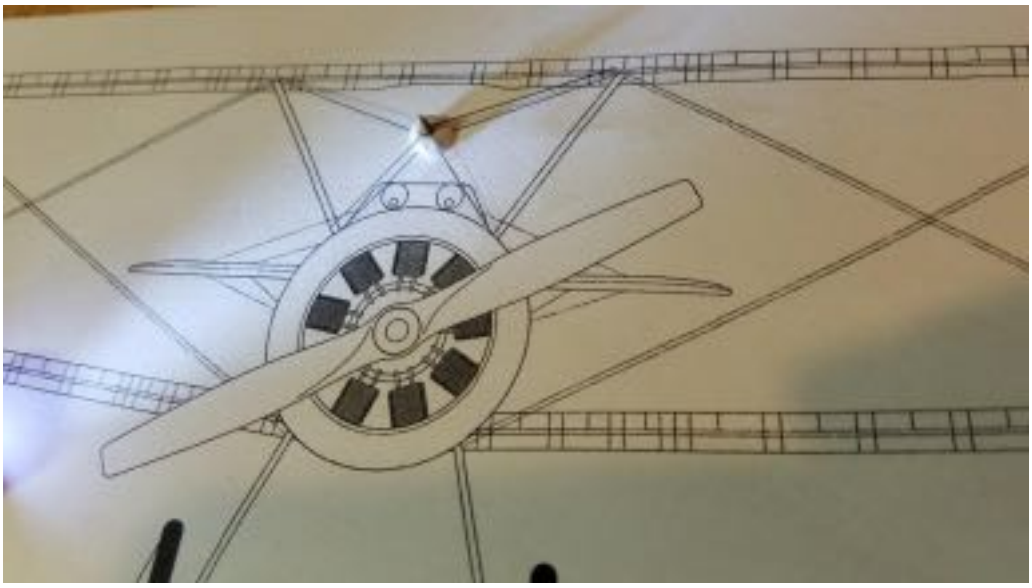
For control lines, which connect cockpit controls to control surfaces, you generally have many choices. On a model, this rigging is "cosmetic", so you may use fine steel wire, the ceramic "Wonder Wire" product (which I have not used), or anything else that will hold a straight line without putting stress on delicate control horns. For the Camel, I opted to use the "Rig That Thing" standard size line sold by Uschi van der Rosten. It is very fine, and has an amazing property of contracting dramatically under heat; you can attach the line with CA glue at each end with liberal slack, and let the heat pull the line straight (I use a Bic lighter!) well below the model, or a hair dryer). It is naturally black but can be tinted with a silver Sharpie. It has little strength, so it won't pull off control horns when you heat it – but this same characteristic makes it unsuitable for models which require the structural strength that rigging provides.

The assembled Wingnut Camel has plenty of natural structural rigidity when the top wing is attached, so that allows consideration of rigging that best "looks the part." In their instructions, Wingnut recommends EZ Line but I opted to take Ray Rimell's advice and acquired the two appropriate types of RB Productions streamlined RAF wire in photo-etched steel; 2BA (for secondary bracing) and ¼"BSF (for main wing bracing). I also obtained their terminals intended for use with these wires. The wire is flat, which in 1/32nd scale gives a convincing airfoil look that would be otherwise missing. It is a little challenging to use; the wire must be cut to length (use dividers, and err on the side of long), then iteratively refined as needed to fit.

For the double flying wires, it's best to pre-fabricate the dual wires before installation; you can use small segments as the lateral spacers. Each end is then secured with thin CA; I use the slick Looper (2.0) tool and Bob Smith glue to do this task. The RB terminals are meant to be folded in extreme origami fashion into a three-dimensional block, but here again I agree with Mr. Rimell that the look is overscale; I detached one side of the terminal to apply flush to the exterior of the wire at the ends. This looks appropriate to my eye (and is an aspect of WWI aircraft that can be gleefully ignored in my usual 1/72nd scale).

The "acorn" assembly between the cabane struts was fabricated using the "Rimell Method", by attaching the four flat wire lengths on top of a 1/32nd scale drawing, then installing the completed assembly after the windscreen was installed.





Since the RB wire is metal, it contracts and expands at a different rate than the plastic model. When the model is cold, I've noted a bit of bowing in the wire, which disappears at room temperature. This behavior could be minimized by securing only one end of the wire and letting the other end float, but I'd be a bit paranoid about the wire staying in place.

After rigging, a bit of carefully targeted satin clear was airbrushed to knock down any eye-catching stray CA gloss, and tone down the metallic sheen of the RAF wire.

Figures do much to bring a model to life. "William Barker" in the completed model presentation is actually a generic "RFC Standing Airman" figure from Copper State Models. The figure is terrific in execution, with fine details throughout, and essentially zero casting flaws. My experience with figures is limited to 1/72nd, where you can get by with base color, wash, maybe a dry brush – and call it good. 1/32nd requires more subtlety and detail so I went to work with a set of AK flesh tones and Mission Models greens for the rest. Basic approach is straight out of Shep Paine. It's my first larger scale figure and a bit crude, but I was satisfied with the result. There are many book and online tutorials for figure painting, but there's no substitute for grabbing one and trying things out. Just do it.

Barker and Camel were mounted to a simple wooden base with pins. The groundwork was made with lightweight spackle, Mission browns, and Woodland Scenics grasses. The modeling guns then fell silent.

I can now say from personal experience that the accolades for Wingnut Wings are well deserved. This kit was brilliantly designed and manufactured, and a joy to build (except for perhaps the RAF wire installation process). I recommend it without hesitation to anyone with a bit of experience and patience – you will be richly rewarded.

That said, I do have a few minor quibbles:

- Fit tolerances are so fine (an excellent quality in general) that any perturbation of part geometry easily leads to fit issues. Generally, you want to remove paint from mating surfaces anyway, but I encountered challenges getting the fuselage to close around the finished cockpit assembly, and in fitting the upper fuselage decking. It was a bit of work to get these assemblies to bend to my will.
- The instructions for cutting away gun decking to reflect Barker's Camel were a bit vague on the port side. The needed modifications could be pieced together from photos, but this particular aspect was less certain than the usual Wingnut instructions, and required a little scratchwork of the rexine padding in that area. I like to use plain old Elmer's white glue for leatherish coaming effects; after painting, it has subtle surface texture which achieve the desired look.
- Multiple clear windscreen parts are provided to reflect the different Camel configurations. Unfortunately, the appropriate version for Barker contained a hole for the Aldis sight, which Barker had removed. This left me needing to scratchbuild a suitable replacement windscreen from clear "viewfoil" stock and a styrene base.
- I didn't notice until after completion of the build that the small wing and tail "B6313" stencil decals are actually printed as "B3613". Too late to fix in my case, and something only apparent to a knowledgeable eye at very close range, but be advised.

The above gripes are very minor in the big picture. I would have none of these comments for a 1/72nd WWI build due to low expectations. Wingnut Wings has set the bar very high and that is the context that must be emphasized. I applaud the folks at Wingnut with gusto for raising the state of the modeler's art.

I thoroughly enjoyed my Wingnut Camel experience. My aircraft wheelhouse is still 1/72nd but I could be convinced to tackle another Wingnut treasure. The new kits keep coming, and some sold-out subjects are now being reissued with very attractive pilot figures. We'll see what the future holds!

This model and others are on display at The Museum of Flight in Seattle through December 6, 2018.

References:

British and Empire Aces of World War 1 (Aircraft of the Aces), Christopher Shores, Osprey Publishing
Sopwith Camel Aces of World War 1 (Aircraft of the Aces), Norman Franks, Osprey Publishing
Building the Wingnut Wings Sopwith Camel, Ray Rimell, Albatros Productions
William Barker, VC: The Life, Death and Legend of Canada's Most Decorated War Hero, Wayne Ralph, John Wiley and Sons

"Sopwith Camel", "William Barker" - Wikipedia

Resources:

Wingnut Wings
RB Productions British streamlined wire and terminals
Uschi "Rig That Thing" Line
Mission Models Paint

[1] https://www.largescaleplanes.com/articles/article.php?aid=3147

[2] http://www.hyperscale.com/2017/reviews/kits/wnw32074reviewjh_1.htm

[3] https://www.britmodeller.com/forums/index.php?/topic/235019827-sopwith-f1-camel-clerget-132-wingnut-wings/

[4] https://modelingmadness.com/review/w1/gb/goodcam.htm

[5] http://www.finescale.com/product-info/kit-reviews/2017/08/wingnut-wings-sopwith-f1-camel-build-review

[Thanks to John Miller and Model Paint Solutions, where this piece first appeared, for permission to use Tim's article. - ED]

Rigging: Common Modeling Skills Applied

by Scott Kruize

Ode to Promote Learning to Rig, by Scott Kruize

'Black Art' it's not; enhancing your repertoire only requires
some patience, to simulate cables and wires

That bound up the multi-wing Great War and Golden Age
planes, when we place replicas on tables and stage

Where appear many cantilever prop planes and jets
whose builders place all of their hopes and their bets

That clean monoplane shapes, at our Contests-and-Shows
Must reward all their makers with ribbons and bows

But they will be much disappointed to learn
how rigging endeavors may more awards earn!

Rigs are visually 'real' if you learn to make do
With fishline and C-A, a.k.a. 'super glue'

I insist tools and tasks are within all our reach
Which is why these techniques are what I tried to teach!

Consider adding rigging to your regular repertoire of modeling skills. This 'how-to' is a review for people who did – and a catch-up source for those who didn't – attend the rigging seminar that followed our October 13 Chapter meeting. The point to make right away: rigging can be done by any modeler, not just those who win 1st-place ribbons and trophies against determined, skilled competition at our Contest-and-Shows. No element of the job of rigging is difficult, or beyond the reach of anyone with normal modeling skills. Rigging IS 'fussy', requiring attention to detail, but that makes it no worse than other tasks: making tight seams, aligning surfaces,

painting decent finishes, or making decals lie down nicely over shaped surfaces, without cracking or silvering. In short: rigging is just one more late step in making a decent replica.

Regular readers recall our Vice-Prez doesn't permit me (or anybody?) to talk or write about what I can't do for the Club, only what I can. Recall also he's been willing to organize after-meeting seminars, but hasn't had a host volunteer in a while.

Two buddies that I carpool to meetings with have seen me stretch sprue, but persist in thinking it's slight-of-hand magic, beyond the ability of ordinary humans. The thought occurred maybe other members might benefit from a stretched-sprue demo, so I offered to host one after the August meeting. Eric went along with that, but remarked what he'd really like is a seminar about the basics of rigging.

I'm no master builder, certainly not one to rig biplanes and the like to perfection. But I was an attentive student at a similar seminar Stephen Tontoni taught several years ago after a NorthWest Scale Modelers meeting at the Museum of Flight. He used to say that with each new build, we modelers should 'stretch ourselves', building some new class of model, testing a new paint or other material, or trying some new technique or skill. Before his presentation, I knew little more than that sewing thread could be tied to a strut, wound around another, and another, and finally tied off again. Enough repetitions led to a state of simulated rigging, if a little bit rough and amateurish. I first tried this Way Back When, raiding Mom's sewing box for black thread while building the ancient Aurora Nieuport 28, Lindberg S.E.5, and Hawk Nieuport 17.

After Stephen's demonstration, I used his techniques on two models thrust upon me by Will Perry, organizer of building model simulations of the Champlin Fighter Collection. Those came out much better than my youthful efforts, even if they didn't make for contest-winning entries. Those current-era-built Sopwith Camel and Fokker D.VII are upstairs in the MOF's Personal Courage Wing's Great War displays. The pic heading this article shows models I've done since: an ancient Inpact Gloster Gladiator and modern-era Roden Bristol Fighter in 1/48th scale, and an even more ancient Airfix Albatros D.Va in 1/72nd.

That led to convincing myself I could at least show fellow IPMS club members what Stephen taught me. I led the seminar at our September meeting, doing the introduction and the first demo work. Further information, refinements, and advanced techniques followed, by Tim Nelson, Jack Matthews, and Ken Murphy. Their rigging skills make for really nice models that HAVE won 1st-place ribbons and trophies against determined, skilled competition at our Contest-and-Shows!

Let me begin as then, reviewing tools and materials. Photos should illustrate:

- Must-have: a table-mount vise, ball-and-socket adjustable to permit its jaws – which MUST be soft-padded – to hold any useful angle, and be easily changed to any other. Pana-Vise® makes the most elegant, but usable cheaper ones can be had. Rigging makes me long for octopus arms...at least a good adjustable vise gives a firm grip on the model while you manipulate line, glue, and accelerant with your all-too-few two hands!
- A small set of essential hand tools, shown lined up in the other pic. 'Man: the Toolmaker' is a phrase I learned in elementary science class an 'eternity' ago. MicroMark® and other sources make great nifty tools available, but I also make some of my own.

Starting at the left, the first two tools are for holding rigging line. The ordinary tweezers include a slight change: since the blades are embossed for gripping in the middle, I put on some heat-shrink tubing to enable a good grip closer to the tips. Next to the

tweezers is a hemostat. I have both straight- and curved-jaw variants, because it's often necessary to clamp and hold an end of the rigging cable.

To anchor any piece of rigging, the minimal need is for a dent in the plastic. You place the line end into it with a bit of CA, and hold it there while placing a tiny droplet of accelerator at the point of contact. A hole all the way through is better: you can gently tension the line where it comes out the hole on the other side, then dab first CA, then accelerant, into the hole from whichever side is easiest. Emphasis from Tim Nelson, a.k.a. RocketMan: “It's all about the hole!” That explains the next set of four small straight probes. The one with green markings is a needle set into a bamboo skewer and sharpened on a fine grindstone. This is my center-punch to locate where I want the drill bit to begin. The drill bits themselves I used to try to twirl in a pin vise, but mine is really too large and awkward for this particular job. I've therefore taken very fine numbered bits, of 20 thousandths diameter, and set them into short, medium, and long skewers.

For drilling plastic parts before starting assembly, I use that short red one, placing the part on scrap plastic or wood, and drilling straight down into or through it. The medium-length one, marked with the red stripes, is for plastic shapes more complex, such as around fuselages. Lastly, the long one marked in blue-and-yellow is used when a hole – or at least a dent – is needed somewhere in a now-assembled model, and can be reached only from an awkward outside position. That's my drill of last resort, but one way or another –I say again, heeding RocketMan's admonition! – you do need at least a dent, and a hole all the way through a part is better.

Stephen rigged with low-test nylon monofilament fishline. I've settled on 4-pound test, which calipers measure out as seven thousandths of an inch in diameter. That's about the smallest I want to handle, and to my eye, looks about right on 1/48th models, my preferred scale. But finer is available, even down to 1 pound test, and would fit better visually on 1/72nd scale models.

That establishes my drill-bit size: 20 thousandths, large enough to 'easily' poke through a single line of the type I use, and with some frowning and fussing, two. Two rigging runs sometimes need to start from a common point.

Stephen's method – to describe further – is to anchor the ends of the fishline with accelerated superglue. My glue of choice is Zap® Industries Zap-a-Gap® medium-viscosity CA+. There are other good superglues out there, if you stick to those intended for hobby use, not general household repairs. Bob Smith® Industries has a whole line of CAs and all are known to work well. What viscosity to use is something of a matter of personal choice – and I've made mine...thick 'gel'-type leaves large unsightly blobs. Super-thin formulas I have used, but have awful trouble confining small amounts to the places I want it to be, and contrariwise, it's very easy for such glue to run all over the place, especially where it's least wanted. (Voluminous details about this quality of thin CA may be readily sourced from our Former Prez-for-Life Terry Moore...).

Cement for polystyrene has no effect whatsoever on nylon fishline or any other rigging line material I know of...except for stretched sprue, which INSTANTLY dissolves and breaks on contact with even the tiniest drop! Stick with superglue, 'CA' (cyanoacrylate), and as I've suggested, medium-viscosity should serve best.

A word about accelerating superglues: when doing structural building, I recommend DON'T! The resulting joint is noticeably weaker than an un-accelerated one, where the CA has been allowed to set by itself, in its own time, undisturbed and undiluted. I use an accelerator for two purposes only: one when I'm using CA as a seam- and gap-filler, where I pile it on, force it to set up instantly, and then shape the resulting blob, right away, with wet sanding. As a filler, ultimate strength is unimportant.

The other job I accelerate is rigging, where again, ultimate structural strength is not important. There's very little tension on rigging line, once installed – as long as you treat the model carefully and don't ham-handedly stick your fingers into rigged spaces. None of you would ever make mistakes like that, would you? Especially not when carefully taking your models to Show-and-Tell, the big model display in February at the Museum of Flight, and certainly not on the way to IPMS Contest-and-Shows.

To apply a tiny amount of CA, and an equally tiny amount of accelerant, I made the little yellow and red probes that you see next, in the tool set picture. They're fine-gauge spring steel (music) wire, with a tiny loop bent into the end, the whole anchored into a dowel or bamboo food skewer.

The model gets oriented in the universally-adjustable vise till the line runs slightly downhill to the attachment point (dent or hole) currently being worked. With a drop of CA in it, the loop is placed against the line just up from the dent or hole, and slid the short distance up to it. The CA will wick (move by capillary action) into the dent or hole. Then an equally tiny drop of accelerant is applied with the other probe, in just the same way. As the accelerant wicks in, the CA will set almost instantly, and then the rigging line can be cautiously released.

After a few such glue drops are set, both the loops jam up with accelerated superglue, so an essential tool is a box of matches, or a candle burning nearby. A brief touch of flame burns off the congealed CA instantly.

Over on the right of the tool set picture, a scrap of plastic supports two sharp thingeys. I handle CA by squeezing out a small dollop onto the scrap, then pick up a tiny droplet with my improvised loop-tipped probe. The scrap saves the work surface – in my case, the dining room table – thereby preserving Domestic Tranquility with my Significant Other, wife Sandra.

The sharp things both come from a cheap plastic multi-blade shaving razor. The blades are carefully cut from it and one made into a miniature knife from a scrap of balsa. This I use to trim the excess off a secured rigging line. Even fine craft- or eyebrow scissors, or MicroMark® cutting tweezers, would still leave a protruding stub, which would immediately attract and offend the eye.

The other blade from that taken-apart razor is unmounted. I'll get to its use towards the end of my description of rigging steps.

The following description of procedures is for doing a biplane, but the basics are similar for any model that requires rigging. To start, look over the unassembled – or only partly-assembled – model, and drill dents or holes where the lengths of rigging need to go. (A fully-assembled model CAN be rigged but that's way more fussy, time-consuming, and hassle-y.) Plan first: with care, routes to bridge many runs, from one anchor point or strut to another, will minimize the total number of runs needed for the whole job. Consider that Bristol Fighter. A single run – one length of rigging line – starts at the upper end of the port front outer interplane strut, to the lower end of the front inner interplane strut, then up to the top of the port forward cabane strut, and finally down to the base of the starboard front cabane strut. An analogous long run is made to match on the starboard wing.

After the planning sequence, followed by drilling, the model is then brought to a mostly-assembled state, except that the top wing is left separate. Depending on the model's actual configuration, it's usually best at this point to glue in the ends of some of the rigging

lines, at the most hard-to-access dents or holes. In the case of the PT-17 used at the seminar, I glued each of the four lines needed for the major wing rigging into holes drilled inside, at the base of, the four cabane struts, where they enter the upper fuselage decking. Only then was the top wing installed on the struts, and the rigging job continued from there.

One end is glued to a hole or dent, then the line is routed and threaded through as many other anchor points as is feasible. Gently, the line is then pulled taut, and the last hole or dent glued. Surplus line is trimmed off with that improvised razor knife, and the next run tackled.

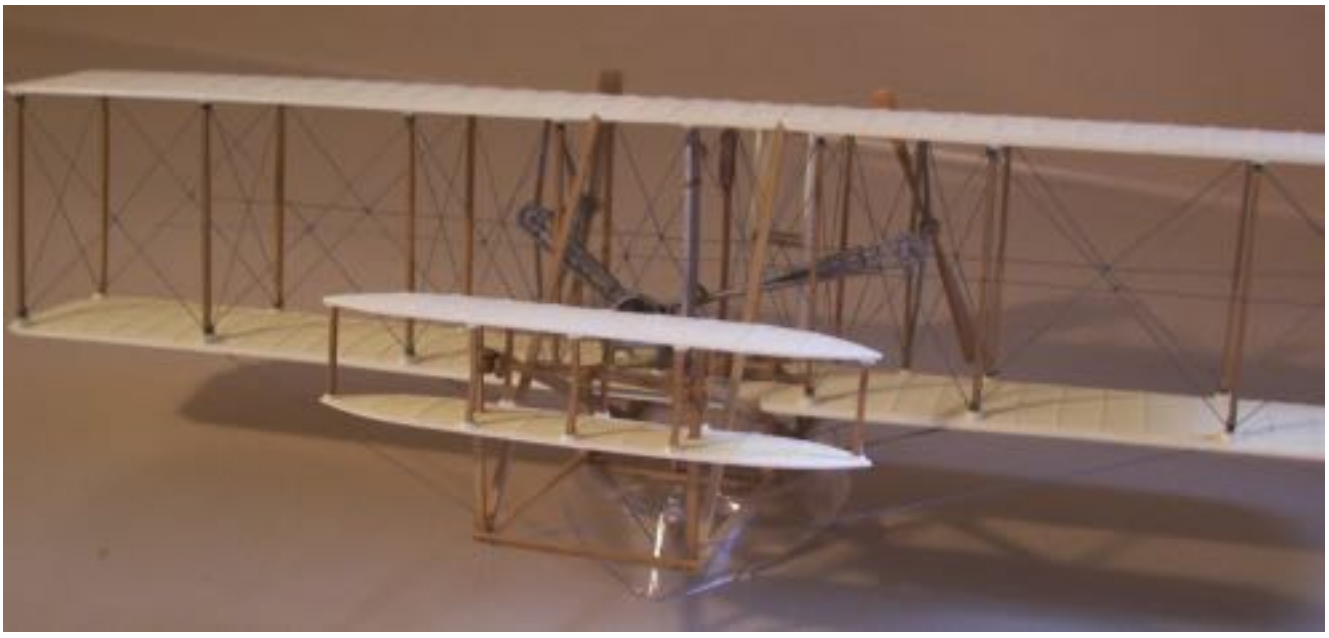
A seminar attendee wanted to know how long, after one starts work on rigging, each run takes. Would that a precise answer could be given! For myself, doing a World War I or Golden Age biplane of standard design, rigging takes a couple of evenings of effort, a couple of hours each. 'Your mileage may vary!'

The last end to be slipped through and glued might emerge from, say, the top surface of the wing just over where an interplane strut anchors. This is where I again take the lead as 'Man: the Toolmaker', figuring something out that Stephen didn't show at his seminar. You can't leave a cut stub of nylon fishline protruding even slightly out of a plastic surface. However thin the line, however short the stub, it's conspicuous and offends the eye...but you can't sand it flush; you'd only destroy the plastic surface around it. That's where my tool idea comes in...OK, I didn't exactly create it, but did figure out how to use it. It's that unmounted thin cheap razor blade: bent down flat against the surface, a slight sawing motion will cut the line right at the level of the plastic surface. A teensy paint dab and that end disappears.

Faithfully following all these steps, as carefully as possible, likely still leaves you with some sags along some fishline runs. Don't whine, don't throw the model against the wall. Some Total Clever Dick has figured this all out. (I wish I could claim it was me...)

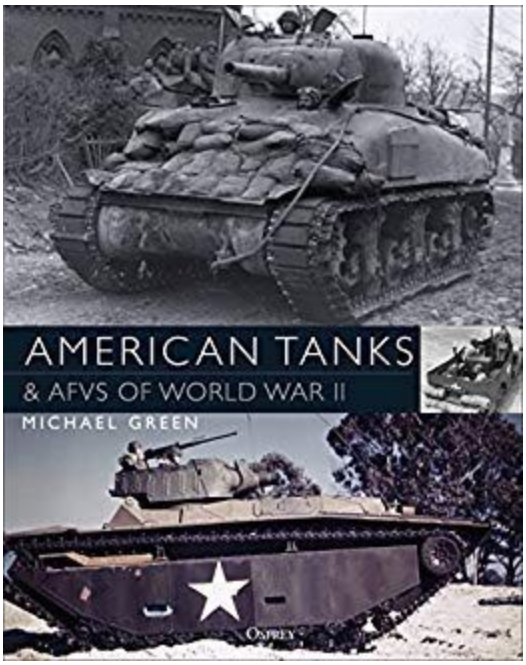
Strike a wooden match, blow it out, and while its head is still warm, wave it near any sag in the line. Not against the line, which will instantly melt through; just near it. (Match must be wooden; paper ones are treated with an anti-smolder chemical, and are uselessly cool even right after being blown out.) My own variation is to use a length of bamboo skewer, a bagful of which I keep handy to mix my paints. If lit and then blown out, it will retain for awhile a tiny glowing ember at the tip, which can be used – again, carefully! – to bring near any sagging lines. These will tighten right up.

That's all I have for now. I repeat: rigging is not difficult, just fussy. It gets easier, and the quality of the work gets better, the more one does it...like everything else, as we model. Those of us who get really skilled augment the techniques described here to incorporate photo-etched simulated turnbuckles at cable-attach points, and even rig closely-doubled-up flying- and landing wires, simulating the actual doubled ones used on 1-to-1-scale planes of the era. But certainly an acceptable rigging job can be done with just Stephen Tontoni's method. Follow his exhortation and try something new. A whole range of subjects you've been avoiding now come into your sphere of possible builds. Regards and encouragement to all!



American Tanks and AFVs of World War II, by Michael Green

reviewed by Eric Christianson



I've been waiting for a book like this for a long time – an inexpensive, comprehensive and readable book on US Armor in WWII. Prolific author Michael Green's latest release covers just about everything that rolled on track and sported a big white star. While there are images of war in this volume, this book is more informative than sexy – perfectly suitable as a go-to resource for research, as well as an easy read next to the fireplace.

Even though the book is separated into chapters set along functional lines, the author begins with a roughly chronological treatise on the often-conflicting design decisions and questionable Army doctrine that guided early development of U.S. armor. The discussion then continues, walking the reader up through the hard-learned lessons of combat and how the Army came to be the irresistible juggernaut that rolled across Europe and up the island chains of the Pacific. It is this style of writing that sets the book apart from encyclopedic tomes that make up similar works. The book is readable, and filled with enough pictures and artwork to quickly move the reader through this substantial, yet fascinating subject.

About the second chapter or so the author settles down into a more standard approach, moving from one type to the next, cleverly tying each new subject into the continual story about armor development during the war, using anecdotal asides and unusual images to spark the readers interest along the way. For example – I didn't know that the US Army never officially referred to the M-18 tank destroyer as the 'Hellcat', nor did it ever use that name in any of the documents of that period. It isn't important to the story, but it is interesting, and fun.

American Tanks and AFVs of World War II is broken down into the following nine chapters; Early Medium Tanks, M4 Series Tanks, Light Tanks, Heavy Tanks, Tank Destroyers, Armored Cars, Armoured Half-Tracks, Self-Propelled Artillery, and Landing Vehicles Tracked. The extra emphasis given to the early M3 Grant/Lee, Stuart and M4 Sherman types reflect their importance in the discussion, but I think my favorite parts, as a modeler, tend to be the more obscure and unusual vehicles that peppered American armor development.

Michael Green has provided an excellent go-to resource at a very competitive price for this comprehensive subject. His particular style, and the organization of the book, make it an enjoyable read cover to cover. I highly recommend this book to any armor enthusiast

interested in creating a well-stocked library, and I look forward to Mr. Green's next release. I would like to heartedly thank Osprey Publishing and Michael Green for providing this book for review, and to IPMS USA for giving me the opportunity to review it.

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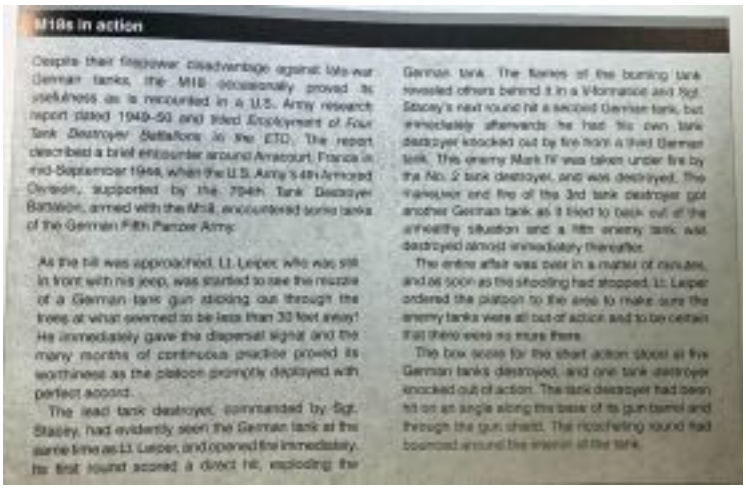


M18s in action

Despite their firepower disadvantage against late-war German tanks, the M18 occasionally proved its usefulness as is recounted in a U.S. Army research report dated 1949-50 and titled *Employment of Four Tank Destroyer Battalions in the ETO*. The report described a brief encounter around Arracourt, France in mid-September 1944, when the U.S. Army's 4th Armored Division, supported by the 704th Tank Destroyer Battalion, armed with the M18, encountered some tanks of the German Fifth Panzer Army:

As the hill was approached, Lt. Leiper, who was still in front with his jeep, was startled to see the muzzle of a German tank gun sticking out through the trees at what seemed to be less than 30 feet away! He immediately gave the dispersal signal and the many months of continuous practice proved its worthiness as the platoon promptly deployed with perfect accord.

The lead tank destroyer, commanded by Sgt. Stacey, had evidently seen the German tank at the same time as Lt. Leiper, and opened fire immediately. Its first round scored a direct hit, exploding the German tank. The flames of the burning tank revealed others behind it in a V-formation and Sgt. Stacey's next round hit a second German tank, but immediately afterwards he had his own tank destroyer knocked out by fire from a third German tank. The enemy Mark IV was taken under fire by the No. 2 tank destroyer, and was destroyed. The maneuver and fire of the 3rd tank destroyer got another German tank as it tried to back out of the unhealthy situation and a fifth enemy tank was destroyed almost immediately thereafter.

The entire affair was over in a matter of minutes, and as soon as the shooting had stopped, Lt. Leiper ordered the platoon to the area to make sure the enemy tanks were all out of action and to be certain that there were no more there.

The box score for the short action stood at five German tanks destroyed, and one tank destroyer knocked out of action. The tank destroyer had been hit on an angle along the base of its gun barrel and through the gun shield. The ricocheting round had bounced around the interior of the tank.

PrezNotes

from page 1

virtually identical for the last 15 or more years, the number of models entered in the Show is falling steadily. I blame the kits!

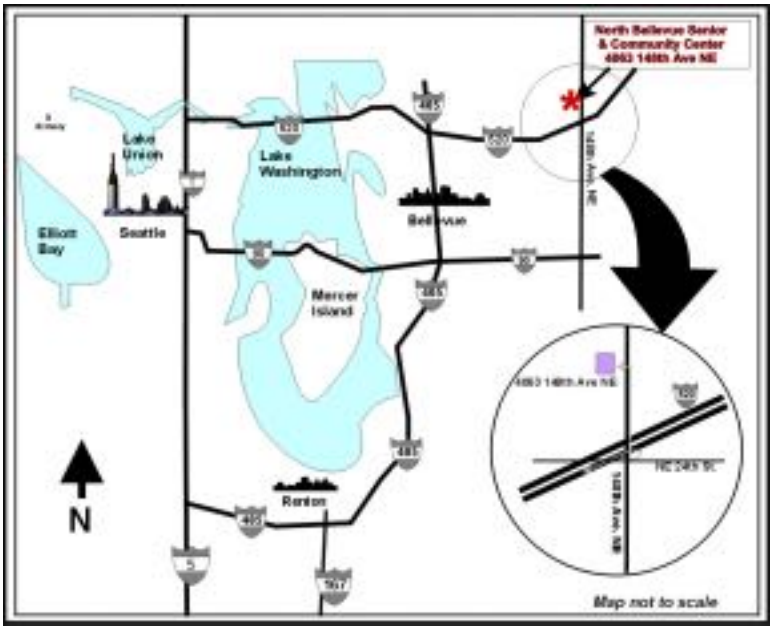
Now to end on a personal historical note: 100 years ago, this Sunday, November 11th, my Great Uncle fell to his knees and wept upon hearing that the Armistice had been signed, ending the years of slaughter he had endured while manning his gun battery on the Western Front.

"They shall grow not old, as we that are left grow old:
Age shall not weary them, nor the years condemn.
At the going down of the sun and in the morning
We will remember them."

(*For the Fallen*: R.L. Binyon)

Andrew Birkbeck

Meeting Reminder



Meeting: November 10

(520 Bridge is closed day of meeting)

North Bellevue Community/Senior Center
4063-148th Ave NE, Bellevue

Directions to NBCSC: From Seattle or from I-405, take 520 East to the 148th Ave NE exit. Take the 148th Ave North exit (the second of the two 148th Ave. exits) and continue north on 148th until you reach the Senior Center. The Senior Center will be on your left. The Center itself is not easily visible from the road, but there is a signpost in the median.