



## THE STYRENE SHEET

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### Putting white warpaint on a 1:72 Meteor

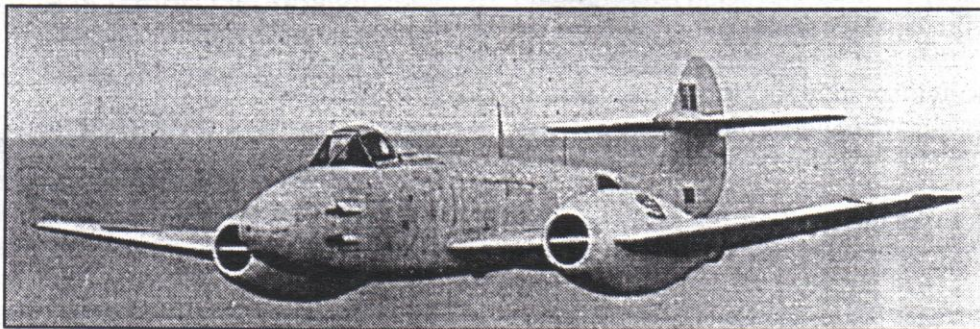
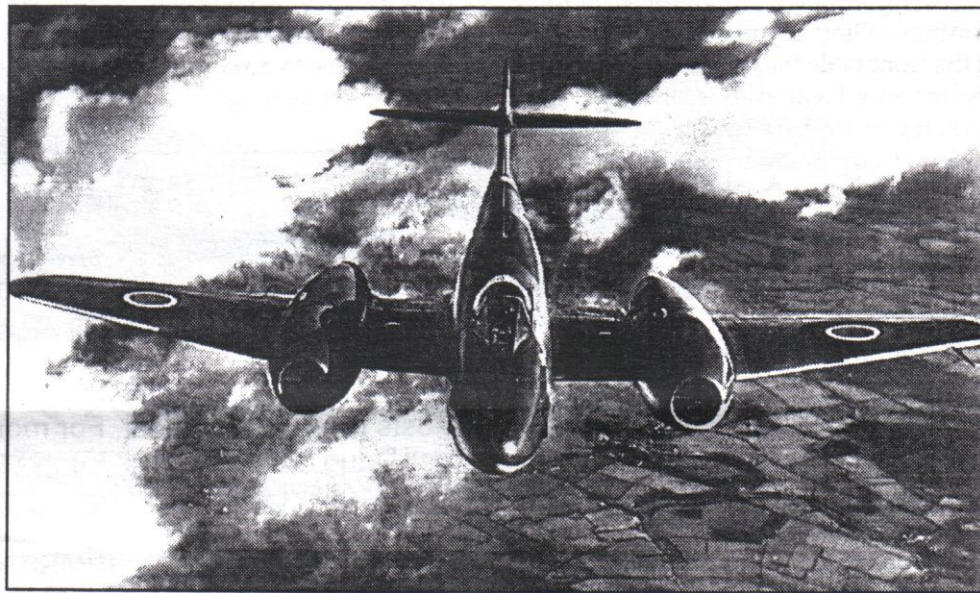
By Mark Schynert

When you talk about jets in combat in World War II, the first type that comes to mind is the Messerschmitt Me 262. However, most do not realize that the Gloster *Meteor* entered operations at almost the same time. The earliest documented combat sortie for an Me 262 is July 25, 1944; *Meteors* began anti-"Diver" (V-1) patrols over England on July 27. The first victory by a 262 (against a *Mosquito*) occurred on either July 26 or August 8; *Meteor* F.1s destroyed two V-1s on August 4.

Despite their operational debuts almost ten months before the end of the war in Europe, the two jets never met in combat. This was partially due to an abundance of caution by the British, who were not keen on the chance the Germans might capture a *Meteor*, but by March of 1945, *Meteor* F.3s were flying into tactical combat on the continent.

*Airfix* issued a 1:72 kit of this early *Meteor* variant in 1969, and it is still available on store shelves. It is accurate in outline, but lacks cockpit and undercarriage detail, and sports

a plethora of rivets. In other words, state of the art for thirty years ago! With this in mind, I felt compelled to turn a \$6.98 kit into something much more expensive, by purchasing an *Aeroclub* white metal undercarriage (\$2.50), *Aeroclub* canopy set (\$1.55), *Cooper Details* seat (\$4), and *Airwaves* photo-etch set (for the *Matchbox Meteor* NF14, but it would still suit for the pilot-cockpit) (\$7.50). Even granting that I ended up with a variety of extra bits, I felt like I had just bought a top-of-the-line Bose stereo to stick into a 1964 Dodge Dart. It's amazing what makes us happy in this hobby.



The *Meteor* wore its usual dark green and ocean gray day fighter scheme on anti-Diver patrols over the U.K. (as in the top photo), but *Meteors* dispatched to mainland Europe wore a white distemper as seen in the lower photograph for ID purposes.

fit at all were the two pairs of air brakes, which required careful trimming. Once they fit, I installed them in the retracted position. Incidentally, the *Airwaves* brass set comes with photoetched air brakes, but these do not match the

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*The Styrene Sheet* is a monthly publication of the Silicon Valley Chapter of the International Plastic Model Society (IPMS). Articles and comments should be submitted to Chris Bucholtz, Editor, P.O. Box 361644, Milpitas, CA 95036, or by E-mail at bucholtzc@aol.com. Excerpts may be published only with the written permission of the editor.

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# FROM THE PRESIDENT

Viva Las Vegas!

This month I'll be passing the torch to our esteemed vice-president, Rich Pedro. Our annual family vacation this year falls on the week of the model club meeting. If you have ever seen the comedy movie "Vegas Vacation," it's like that and the two other "vacation" movies combined into one. It's one full week of listening to my brothers and sisters whining about anything they can think of whining about. Why do I do this, you ask? Its Just one of those things you have to do.

Speaking of whining, one thing I hear while sitting up front is some folk saying, "When are we going to start the meeting?" This is a hard decision, so I have to wing it meeting to meeting. When I am up front and see that there is a lot of info being exchanged, I will usually just sit back and let you folks go to town and have fun. If I see that there is a unusually large showing of models I will figure about five minutes for each, do the math and get things rolling. If you need to leave early, put your models on the front table (nearest the door) and let me know which ones are yours. I will try to accommodate you and get you out ASAP. If you are not really in a rush, get up and mingle! Talk to your elected board members, talk to me, pay your dues, take a close look at the models, look at the vendors' tables, meet new people, ask questions and get your questions answered.

Remember, the meeting is a place:

- For us to get together, (for some on neutral ground!).
- For us to talk shop about whatever we are working on or whatever comes to mind.
- For you to find people with similar interests.

## EDITOR'S BRIEF

Welcome to our annual nationals issue. As is par for the course, Mark Schynert has made July his month, following up on last year's cover story on the de Havilland Dragonfly and 1998's piece on the Do 28. Mark stands out as perhaps the epitome of our club's members: a busy father, but one who's not afraid to try a vacuform or resin kit. He builds because he loves airplanes, especially weird things like the Hetson Racer or the IK-3. He also writes, which your editor appreciates! Please, the rest of you—keep it up!

Mark may be at this month's meeting, but many regulars won't be. Mike Burton, Angelo Deogracias, Roy Sutherland and many others will be in Dallas at the nationals, judging even as the rest of you meet. Bill Ferrante will be absent, since July 21 is his girlfriend's birthday. Don't panic—we'll all be back! And, if you've been in the club longer than 12 months, you know the post-nationals SVSM meeting is one of the three loudest of the year (surpassed only by the Pizza Party/Gift Swap and the January "Two Months of Models Shoved into One Meeting" meeting).

If you're picking this up at the nationals in Dallas, welcome! The Styrene Sheet's available to out-of-the-Bay-Area folk for just \$12 a year. We've given away a limited number of issues at the big show for the past six years now; I'd like to think that the Styrene Sheet is, like the nationals, improving every year. Thanks for taking a look at us!

—The Editor

- To find out about new models and products.
- To get contacts on products that are unavailable or out of production.
- To find information.
- To see people we normally don't get to see.
- To learn.

And the list goes on. Make the most of the meeting in the time available, which averages to about three hours. Most of all, have fun. Don't just sit there warming the seats. We try to keep it interesting and Richard and I try to get things running by 7:30 p.m.

If you have any suggestions feel free to let me know. If you can help out setting up/taking down the tables/chairs everyone would be most thankful and remember, keep those submissions for the Styrene Sheet coming in.

Now, for those of you going to the IPMS Nationals in Dallas this year, GOOD LUCK, Y'ALL!! As for me, I'll see you in August. I have to go count my coins for the slot machines at the Luxor—cha-ching!

## CONTEST CALENDAR

August 20, 2000: **IPMS/Central Valley** hosts its **annual contest** in Fresno, California. For more information, call Nick Bruno at (559) 229-3675.

September 9, 2000: **IPMS/Reno High Rollers** hosts its annual contest. For more information, call Doug Summers at (775) 747-5931 or e-mail him at GHPLtd@aol.com.

September 23, 2000: **IPMS/Humboldt Bay** hosts its **annual contest** in Eureka, California. For more information, call Mitch Bartel at (707) 826-1380 or e-mail him at mitchy2@juno.com.

October 22, 2000: **IPMS/Orange county** hosts **The Region 8 Convention-OrangeCon 2000** in Buena Park, California. For more information, call (949) 631-7142 or e-mail ocipms@aol.com.

October 28, 2000: The American Scale Modeling Organizaton presents the **Central Valley Modeling Expo** at the Legion of Valor Museum in Fresno, California. For more information, Call Ernie Gee at (559) 438-1628 or e-mail him at elitemodels@aol.com.

November 11, 2000: The **Antelope Valley Group** hosts its **Fourth Annual Contest** at Antelope Valley College in Lancaster, California. For more information, call David Newman at (661) 256-6359 or e-mail him at dneuman@as.net.

# The buzz on MPM's 1:72 SB2U-3 "Vibrator"

By Chris Bucholtz

The *Vindicator* was an attractive airplane, and one that gained some none-too-complimentary nicknames from its pilots: the "Wind-Indicator," based on its relatively slow speed (250 mph), and "Vibrator," a reference to the sensation caused by the Pratt & Whitney R-1525 Twin Wasp Engine on the long, streamlined fuselage. In reality, pilots liked the SB2U, and it was a revolutionary aircraft. Created based on the same Navy request that led to the SBC *Helldiver* and the TBD *Devastator*, the SB2U was the Navy's first monoplane scout bomber. Its pioneering status is indicated by its competitor, the Vought XSB3U, a biplane design ordered as a contingency against the monoplane's failure!

The MPM kit is the best injection-molded kit to capture the

such parts as these and the equally mushy-looking control panel really lets down MPM's efforts on the rest of the model and the single-piece canopy, while it may be clear, wouldn't allow viewers to look inside. This is a far cry from MPM's past efforts, where the interiors were often the highlight of the kit.

Externally, the kit's a beauty. The panel lines are recessed, with features like the reinforcement strip at the wing root in restrained raised detail. The wings and fuselage have a lovely fabric effect—not overdone, but visible. The lower wings are missing panel lines for the flaps, instead providing one long unbroken flap that spans the entire bottom of the plane. The landing gear and bomb displacement gear are okay, but need some attention to clean up mold flash. The wheels are very nice. A 1000-pound bomb is provided in halves, and two 100-

pounders are provided in resin. Small pylons for the wings, and a tailwheel are provided as separate parts.

The resin parts include a bomb sighting telescope and bomb cradle hardware, which are both very well done.

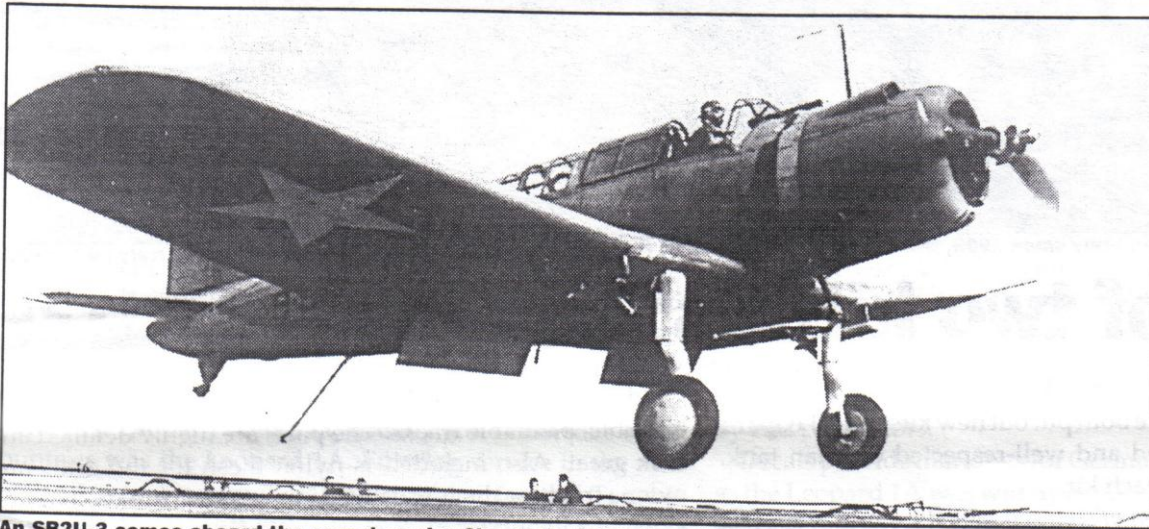
The engine front is another resin piece, which goes between the two halves of the cowling. A reasonably good propeller goes into a hole in the en-

gine crankcase, and two stubs of plastic simulate the exhaust stacks. Metal tubing would be a better alternative.

All is going well until we reach the most challenging part of building an SB2U-3: the oil cooler/carburetor air intake scoop on the cowling. This was a wide, square-mouthed fairing on the starboard side of the upper cowling. MPM's part is too long, too narrow and rounded at the front, making it completely inaccurate. The modeler is going to have to scratchbuild this part; MPM's attempt is absolutely useless.

The decals include James Marmande's aircraft #6 from VMSB-241, which was lost at Midway, a VMSB-2 aircraft at Ewa from March to December 1941 and a VMSB-131 plane based at Camp Mitchell, North Carolina in 1941. The Midway bird wears a worn scheme of non-specular blue gray over non-specular light gray, while the North Carolinian and Hawaiian SB2U-3s are overall non-specular light gray. The decals are quite nice, and include optional red centers as well as pink centers to replicate the effect of painted-out red centers.

This effort is by far the best SB2U in 1:72 scale, but it's still a disappointment. The substandard interior parts and grotesque carburetor/oil cooler scoop mean that anyone serious about building an accurate *Vindicator* will have to do a bit of scratchbuilding, but MPM hasn't provided any challenges a determined modeler can't overcome.

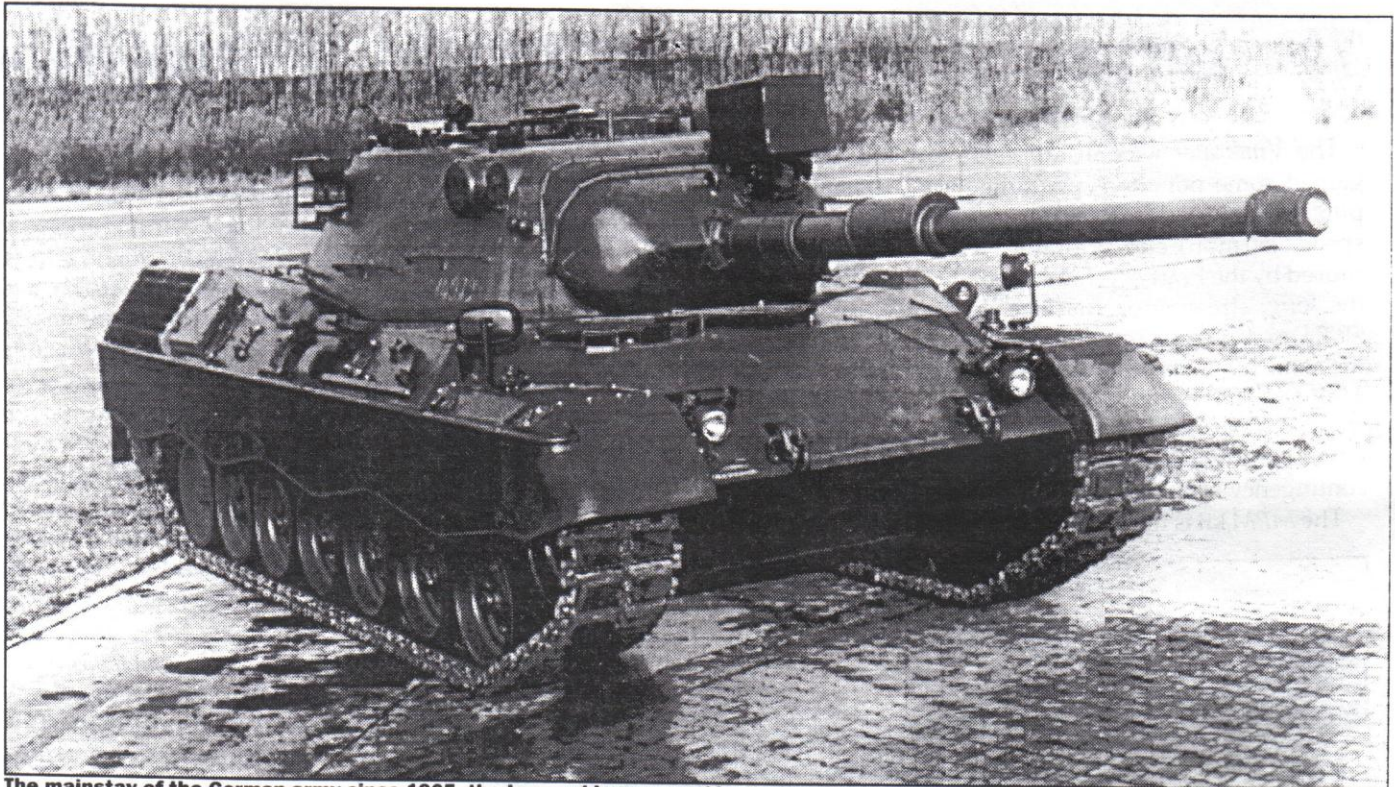


An SB2U-3 comes aboard the escort carrier *Charger* in 1942. Note the square shape of the carburetor intake.

SB2U-3, arguably the most important variant. This new *Vindicator* is a -3 while *Meikraft* kit is a -1 and the *Pegasus* kit provides an attempt at doing a -1, -2 or -3 but comes up a little short (the wings are -3 all the way). In addition to far superior detailing and molding, the MPM kit has the longer horizontal tail, which allows you to build a -3, British *Chesapeake* or French V-156 but not one of the more colorful -1 or -2 models.

The kit contains 41 injection-molded parts, ten resin parts and an injection-molded canopy. Two of the things MPM has done in the recent past—omitting the photo-etched parts and replacing the vacuformed canopies with single-position injection molded parts—have not steps in the right direction, and you can clearly see in this kit how they're affecting MPM's design strategy.

The interior consists of a cockpit floor, a pair of plastic seats, the decking for the radio compartment, a scarf ring in plastic, a resin machine gun, a two-piece plastic control panel and a pair of sections of the tube structure of the cockpit sides. There are small and poorly detailed plastic parts that attach to the tube structure to replicate the throttle quadrant and electrical distribution panel. A rollover brace goes behind the pilot's seat. There are also two control columns, which is odd because the SB2U-3 was a single-control aircraft. Leave out the radioman/gunner's stick, and figure out how to plug the hole in the floor! Since the kit includes resin parts, the provision of



The mainstay of the German army since 1965, the Leopard is now used by Norway, Belgium, Denmark, Holland, Australia, Italy and Canada.

## A tale of two kitties: Leopards in 1:35

By Laramie Wright

*Tamiya* and *Italeri* have both put out new kits of the Leopard in 1:35, the widely-used and well-respected German tank. Here's a quick look at each kit.

*Tamiya: It was the best of times, it was the worst of times...*

The clever fellows at *Tamiya* have recently released their version of the German Leopard 2A5, the Bundeswehr's most modern tank. At first look, I must tell you it is a beauty! They appear to have done their homework very well, resulting in what must be the state-of-the-art armor kit.

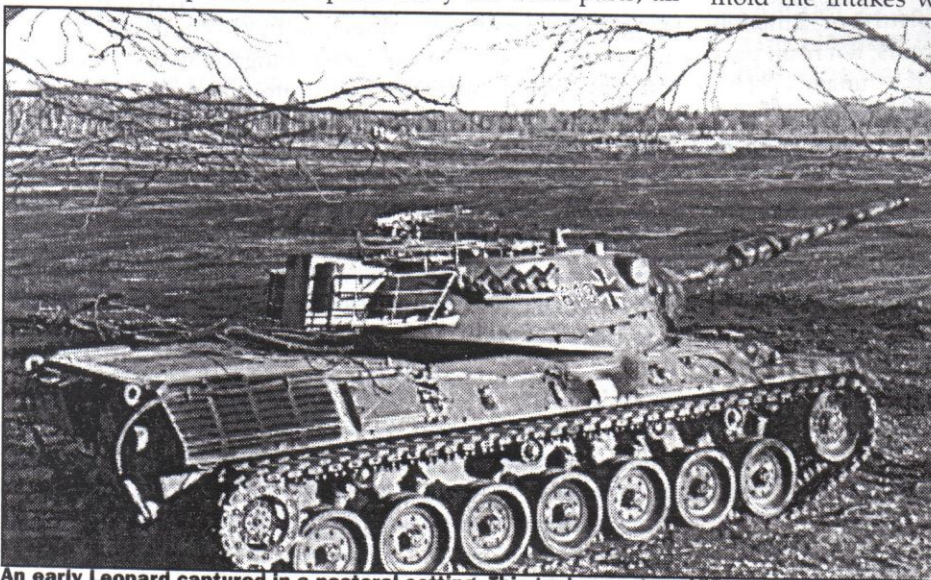
The Leopard kit consists of the turret top and bottom, upper and lower hull parts, four sprues carry the other parts, all

molded in dark green plastic, along with the new formula glueable, paintable tracks. The parts are highly detailed and look great. Also included is nylon mesh for the grills and nylon string for the tow cable. I am not sure if there is really a hell of a lot left for after-market manufacturers to improve on. (I know, I know, they will anyway for the AMS junkies out there.)

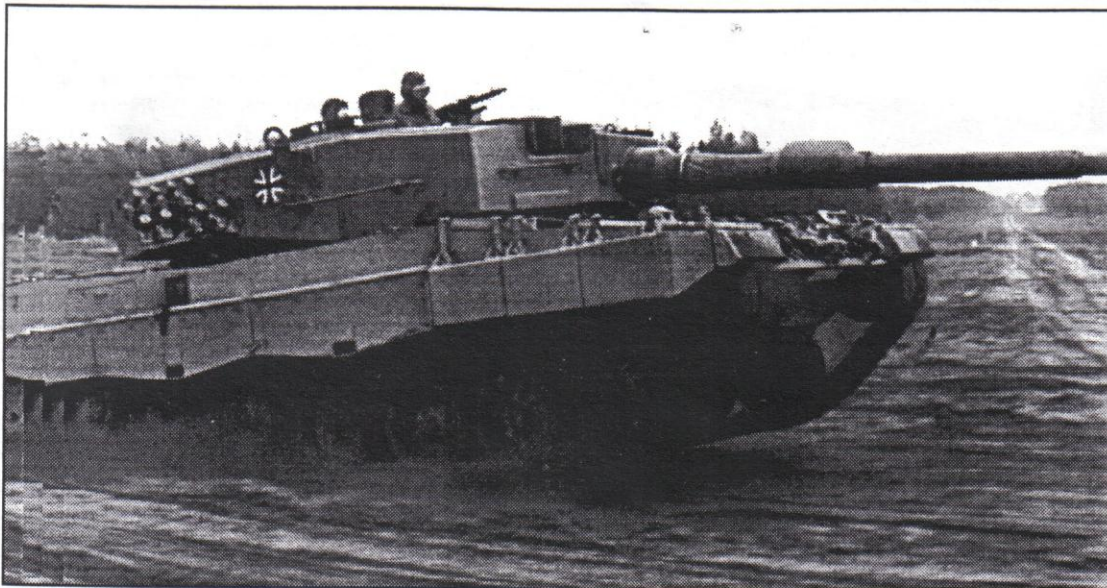
The outstanding feature is the molding on the intake fan openings on the rear deck. The word stunning is used much too frequently in reviews, but in all honesty, stunning is the word for them. The *Tamiya* mold makers have managed to mold the intakes with the appearance of both the woven screens and the frames underneath! It is a very impressive job that will just pop right out with painting and dry-brushing.

Other nice areas include the exhaust grill at the rear of the hull and details on the hull sides. The running gear comes with separate swing arms for each station. *Tamiya* included alignment jigs like those in their JS III, which should make it an easy task to line up the axles. And, wonder of wonders, *Tamiya* finally has included sponson floors! They are molded as part of the lower hull and are very welcome additions.

There are five markings options available, all for Bundeswehr vehicles, including one in KFOR markings.



An early Leopard captured in a pastoral setting. This tank mounts a 155mm main gun.



**The Leopard is well-respected for its ability to cover ground in a hurry, aided by its 850 horsepower engine.**

Now for the bad news. The retail price for all the raptures described above is \$52. Ouch! Discount houses will, of course, take some of the sting out of the purchase, but still it is very expensive, especially compared to the recently released *Tamiya* Type 90 JSDF tank that retails for \$38 and is comparable in size and detail. With the very nice *Italeri* Leopard 2A5 retailing for \$27 I would be hard pressed to cough up the extra \$25 for the *Tamiya* kit, lovely though it is.

*Italeri: It is a far, far better thing I do than I have done before...*

The first Leopard used by Germany and numerous other countries was the Leopard 1A. Entering service in the mid 1960s, it was a groundbreaking machine for the German Army and armaments industry as it marked their return to producing tanks. The Leopard was a successful design and brought German military technology back onto the world

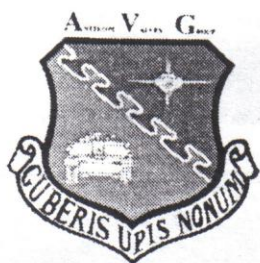
stage.

Until now there was only the old 1970s-era *Tamiya* model of the Leopard 1 in 1:35th scale, which is toy-like and not very accurate. *Italeri* has just released a new kit of the Leopard 1A that is a very good representation of the original. The hull and running gear look to have been taken directly from their Leopard 1A4 kit which, though it dates from the early '80s, is still a superb kit. The turret parts are all new, representing the "inverted frying pan" type that was the initial form, with its atten-

dant details and fittings. It mounts a 105mm main gun without the thermal sleeve. Other fittings include smoke projectors and an over-the-bore searchlight, along with stowage racks on the rear.

The overall molding quality appears to be very good on both the old and new parts. The vinyl tracks are crisply molded and very well detailed. *Italeri's* mold makers did a first-rate job on the tracks as they really capture the look of the actual Diehl tracks. They are molded in a silver plastic and are so well molded that the track shoes appear to be separate links held together by end connectors.

Decals provide markings for German or Italian vehicles, but as the Leopard 1A was widely exported, many other schemes are possible. It would also be a fairly easy conversion to add the bolt-on supplemental armor that appeared in the late '70s/early '80s with enough reference material.



## Antelope Valley Group/IPMS

Plastic Model Club is pleased to announce

# Our Fourth Annual Contest Saturday, November 11, 2000

Antelope Valley College, 3041 W. Ave K, Lancaster, California

Special Awards For: Best Korean War Model  
Best X-Plane

For more information, contact: David Newman, (661) 256-6359 or [dnewman@as.net](mailto:dnewman@as.net)



Miles built the *Messenger* at the request of certain British Army officers looking for a more comfortable battlefield transport without the knowledge of the Ministry of Aircraft Production, a fact that got Miles into some hot water. 21 M.38s were delivered nonetheless.

## STOL, Miles-style: 1:72 *Messenger* from Pavla

By Mark Schynert

The last few years have truly been a golden age for 1:72 modelers, especially if their area of focus is World War II aircraft. While there are some types for which a vacuform or even scratchbuilding is still the only alternative, these become fewer with each passing month. One of these obscure birds, the Miles M.38 *Messenger*, is the subject of a new limited-run injection kit by the Czech company *Pavla*.

The *Messenger* is perhaps unique as the only single engine monoplane with a triple tail to ever reach production, though less than two dozen were built during the war, with about 60 more following for the postwar civil market. The result of a private request to George Miles from army officers for an aircraft for AOP (air observation post) duties, the *Messenger* could carry a crew of two along with radios, armor protection and other military equipment. It also had outstanding short-field capability in all weather, much like the more well-known Fiesler Storch.

The *Messenger* met all the requirements included in the private

request that led to its design, but when the Ministry of Aircraft Production discovered Miles had designed, built and tested a military airplane without its knowledge a minor uproar ensued. The MAP refused to order any *Messengers* for AOP duties, but a year after its first flight ordered 21 as VIP transports.

The *Messenger's* primary claim to fame was as a forward area conveyance for Field Marshal Montgomery, starting on D-Day Plus 6, when it was reputedly the first Allied aircraft to land in liberated territory after the initial invasion.

*Pavla's* kit is multimedia, consisting of an injection sprue with 17 pieces (fuselage halves, one-piece tailplane, three fins-



Field Marshal Bernard Law Montgomery, his pilot Flight Lieutenant Trevor Martin and an unidentified third Briton pose in front of their *Messenger* on D-Day Plus 6. Note the invasion stripes.

propeller, two main wheels, two main landing gear legs, tailwheel, two trailing edge flaps and engine front), six resin pieces (two venturis, two control columns, instrument panel and four-seat interior), two clear vacuformed cockpit enclosures (one military, one civil), and a photo-etch fret with 12 bits (six flap hinges, four seat belts, generator impeller and pitot). Additionally, the modeler is expected to scratch-build either an exhaust pipe or four exhaust stubs, as well as two undercarriage braces. The kit



**A handful of Messengers are still flying today. Most of the production run was sold to the civil aviation market at the end of the war. The nimble plane had a top speed of just 116 mph.**

also makes no mention of the whip aerial right aft of the cabin dorsally, though this shows in the box art. Decals by *Tally Ho* are provided for Montgomery's plane and for a civil example that is airworthy today.

Although the kit layout is straightforward for the most part, there are a few caveats. First, as for most limited-run kits, a lot of cleanup will be necessary for the injected parts, as they have a bit of over-pour around all the edges, too thick to be described as flash. Based on my experience with other *Pavla* kits, this will be easy to remove. As the prototype was wooden, there are few panel lines, and these few are well-executed.

The flying surfaces, except for the flaps, all are to be butt-joined. Fortunately, the wings are so small that there shouldn't be any strength issue with this arrangement. There are guide lines for the wings and a bit of a notch for the horizontal tail, but you're on your own when it comes to aligning the fins.

The flaps may end up presenting the biggest construction

challenge, as they are connected to the wings only by three photo-etch hinges on each side. Fortunately, the instructions are very precise about the location of the hinges, but this will be delicate work, probably best left until the very last. In fact, it might be best to do all the painting and decaling before attaching the flaps.

The instructions on the whole are fairly precise, though most of the assembly drawings are crude. On the other hand, the two three-view drawings for painting and decaling are well-rendered, but with regard to Monty's aircraft, there is one glitch. The box art shows invasion stripes; the instruction drawings do not, and no decals are included. Well, the box top is right. The box art may be good enough to guide you in painting the invasion stripes, but the omission from the instructions is ridiculous.

At a retail cost of \$16, this kit is a good value, and it appears it will build into a very attractive little model.

## Need a few pointers?



## Get them at the SVSM Modeling Clinic

**Every first and fourth Friday of the month at the Reid-Hillview Airport Terminal**  
**Work on your models with your fellow modelers—share tips, learn new techniques, and have fun!**

# Gloster goes continental: Meteor in 1:72

Continued from page 1

dimensions of the *Airfix* kit's brakes. The brass might be closer to the correct dimensions, but even if it were, it would be a nightmare to convert the kit to take it.

Next, I took on the rivets. Fortunately, the only really severe rivet rash is on the aft fuselage; I rubbed this down with steel wool until only a faint hint of the rivets remained. There were more rivets on the empennage, but I felt I was going to lose too much other detail if I fussed with them, so I didn't.

The wing is free of rivets, but has other problems. The lower wing is one piece, tip-to-tip, with wheel well cutouts between the fuselage junction and the engine nacelles. Of course, the upper wings provided no housing of the wheel well, nor any other detail, except for peg with a hole in it to accept the top of the undercarriage leg. I decided this was too rudimentary for my tastes, so I used some sheet styrene to seal off the wells. Unfortunately, this made for a bad fit with the fuselage at the wing root, so I had to excavate material from inside the fuselage wing root fillet to get everything to fit again.

The Derwent engines cannot be seen, except for a disk with a spar running horizontally across it at the intake. This is a horrendous bit, for the nacelles are split top and bottom, incorporated in the respective wing halves. In other words, there are two very visible seams inside the lip of each nacelle. Worse, the starboard intake disk did not fit properly in its track, making it impossible to bring the lower and upper wing together. The latter problem required several sessions of filing and shaving before I got an adequate resolution. I added the landing light to the lower port wing, backpainting it with silver, but set the wings aside without further assembly to work on the fuselage.

Next up was to construct a cockpit where *Airfix* had provided just four parts—floor, rudimentary seat, featureless instrument panel and aft armor bulkhead. I tossed the seat and used the other three pieces as foundations for the rest of the cockpit. The *Airwaves* brass set provided cockpit sidewalls with various added bits, instrument panel, and rudder pedals in troughs. I added the *Cooper Details* seat and a control column and gunsight from the spares box, to get a reasonably complete cockpit. I also added as much lead shot as I could get into the nose.

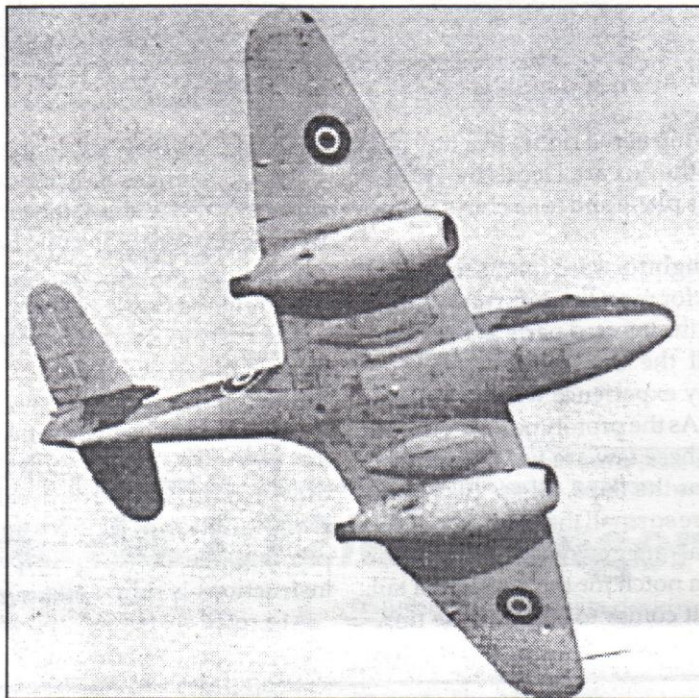
Behind the armored bulkhead, there was no detail at all, allowing for a view through the canopy to the hollow inside of the mid fuselage. Research revealed this is where the *Meteor's* ammunition supply was stored, so I fashioned a horizontal bulkhead and butted it against the back of the

armor. Above this, I took part of a 1:48 P-38 .50 caliber ammo box and cut it to fit. This gave details fairly close in scale to a 1:72 20mm ammo container. I also took the opportunity to stuff more lead shot under the horizontal bulkhead.

Having finished the interior, I glued the fuselage halves together. Boy, talk about prominent seams. However, the

seams were easy to access, and there wasn't much detail, as I had already rubbed off most of the riveture, so it all cleaned up in a remarkably short time. The tailplanes went on next; again, the seams were profound, but not difficult to reduce.

I turned again to the wings. It took a lot of dry-fitting to get the top wings to snug down onto the bottom, both because of the aforementioned intake disk, and because the landing light was a little too thick for the space on the inside of the wing. Finally I managed to get the whole thing together and dealt with the leading edge seams, but the inside lips of the nacelles presented the biggest challenge. First I



**A Meteor Mk. 3 shows off its wing planform. The nacelles, with the wing spars carrying through the intake, present a modeling challenge.**

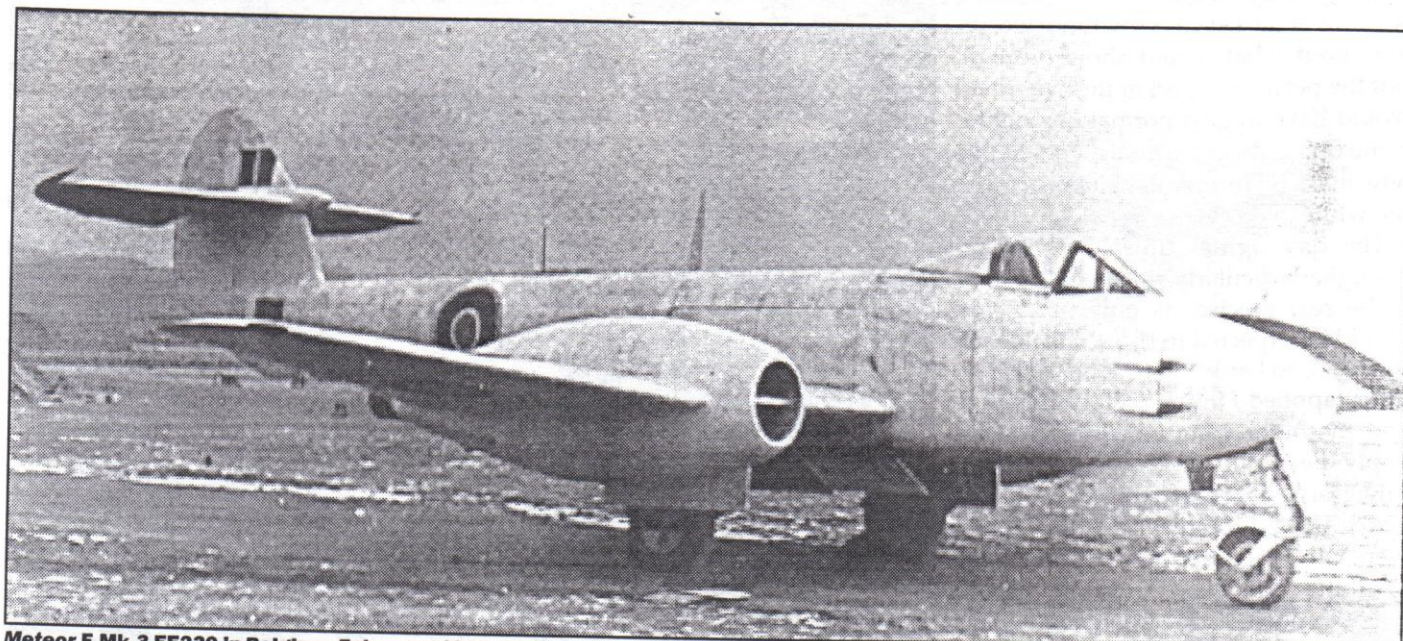
sealed the seam to the outside with CA, hoping it would penetrate to the inside. Then, since CA would be too hard to work with on the inside, I dabbed some Dr. Microtools putty on the offending blemishes and spun a toothpick around the inside edge of the nacelles in an effort to flatten it out. Even after this, there were still notches at the nacelle leading edges; a little CA, followed by sanding the face flat again with a Dremel tool, solved that. And I had to work on the inside seams a little more with a round riffler file, first bare, and then with some 600 grit sandpaper on it, to adequately subdue the inside seams.

Happily, the nether ends of the nacelles presented no seam problems, because the kit comes with separate jet pipes. Once cleaned up, these work very well. They even cant slightly downward, as they should.

The main event turned out to be the wing-fuselage mating. It took about eight hours to completely resolve the seams. The problem lay mainly with the wing-root gaps, which had about 1mm of separation, but also suffered from diverging gradient (the root was lower than the wing) starting just past mid-chord. I was also trying to preserve as much of the raised detail on the wing as possible. This required no particular cleverness of technique, just very methodical sanding and filling.

Two other seams threatened to be troublesome. First, the fuselage-half seam runs right through the nose gear bay; I





**Meteor F.Mk.3 EE239 in Belgium, February, 1945. The blotchy nature of the paint suggests a single coat of semi-permanent white distemper.**

finished this one by cutting a piece of .05 card to fit into the bay, covering the whole seam aft of the nose gear attachment point. I had to bend it by hand to fit, but the whole process from first cut took only about four minutes. There is also a dorsal blade aerial aft of the canopy with a small-disc-shaped base, which is supposed to fit into a disc-shaped orifice to give a flush mount. The seams around this were so bad that I ended up cutting off the aerial, filling and sanding the whole area flush, then glued the aerial back on again.

At this stage, everything was together except the undercarriage, its associated doors, and the canopy. This seemed the right point to begin the exterior finish. I started by taking the kit canopy, fastening it in place with Elmer's glue, then coated it with Micro Scale Liquid Mask. My intention was to use the kit canopy as an efficient mask of the cockpit area, since it fit so well, but I wanted to protect the canopy itself from paint in case my one shot at cutting out the *Aeroclub* vacuformed canopy didn't work out. (*Aeroclub's Meteor* canopy set gives you one F.1 canopy and one F.3).

I applied an aluminum finish to the three gear wells, then masked these areas off as well, and I also masked the intake and efflux of each engine. I was now ready to apply the main color scheme.

Like other RAF day fighters in Northern Europe in the later war years, the *Meteor* went into operations with topside colors of Dark Green and Ocean Grey, and an underside of Medium Sea Grey. However, when deployed to continental air bases in January of 1945, the *Meteors* of No. 616 Squadron were painted white overall, most likely to provide clear identification to AA gunners not accustomed to the existence of Allied jet aircraft. Only the national markings in six positions, the fin flash and the serials were still visible, though in some cases, the two-letter serial prefix (EE in all cases) was painted over. The original finish was still visible behind the serials and marginally about the roundels, and the white was apparently only one coat, which meant that the original day fighter camouflage showed through the white to some extent. As I wanted to try to duplicate this patchy look, the good news was that I



**Aircraft of 616(F) Squadron, in the U.K. and in their usual colors, being topped up for another alert period in the campaign against the V-1.**

could actually look forward to painting white over darker colors without worrying about what would show through. But the peculiar aspect of this was that I would have to do a normal day fighter camo finish, decal the model, then somehow mask off the decals before applying the white overcoat.

The day fighter finish was simple enough, particularly since I didn't need to be real precise, as only hints of it would be expected to show through the overcoat, so I airbrushed it on freehand. I then applied Future to the aft fuselage and the outer wing panels, so I could apply the decals.

Regrettably, the kit decals weren't very good. The C.I roundels for the fuselage were out of register, and the red and blue of all the roundels were too bright, so I used equivalent size roundels from a couple of *AeroMaster* sheets. The latter were thinner anyway, which made the decaling a pleasure. I did use the kit fin flash, even though the color was off a little, since I didn't have a good replacement available, and I used the serials that came with the kit. Interestingly, though the kit instructions do not discuss the white finish, the best photo of the white finish I have shows exactly the same serial (EE239) as provided in the kit! In this particular case, the 'EE' prefix was overpainted, so I removed the letters before applying the serials. The only other marking to add was an individual aircraft letter (in this case, 'Q') in black painted on the front nosewheel door. To deal with this, I separately painted all the doors medium sea grey, then white, applied Future only to the front nose door, added the 'Q', then painted over it with railroad flat.

Once the decals were fully set, I had to mask them. I tried using rice paper tape, since I clearly needed something with low tack, so it wouldn't lift the decals. I took a strip of the half-inch tape and applied it to a white ceramic bathroom tile I have on my workbench as a foundation for cutting photoetch. I then paralleled and slightly overlapped it with a second strip. I then matched each roundel size with a slightly larger circle on a circle template, drew the respective circles onto the tape and, using the template as a blade guide, cut the circles out with a new #11 X-Acto blade. I laid these over the roundels; the translucency of the tape made it easy to get correct placement. I masked the fin flash and serials with small rectangles of the tape.

The coat of white paint was almost an anticlimax. It's very easy to get white to not completely cover underlying dark colors, so I was done before I knew it. Now the acid test came—were my masks effective? And would they yank the decals off the plane? As it turned out, I only had one decal ruined by the tape, an upper wing roundel that was easily



**At top, Mark's model, approaching completion (with Mark, Mike Meek and Randy Ray in the background); below, the real item in flight in 1945. Note the extra-small fin flash.**

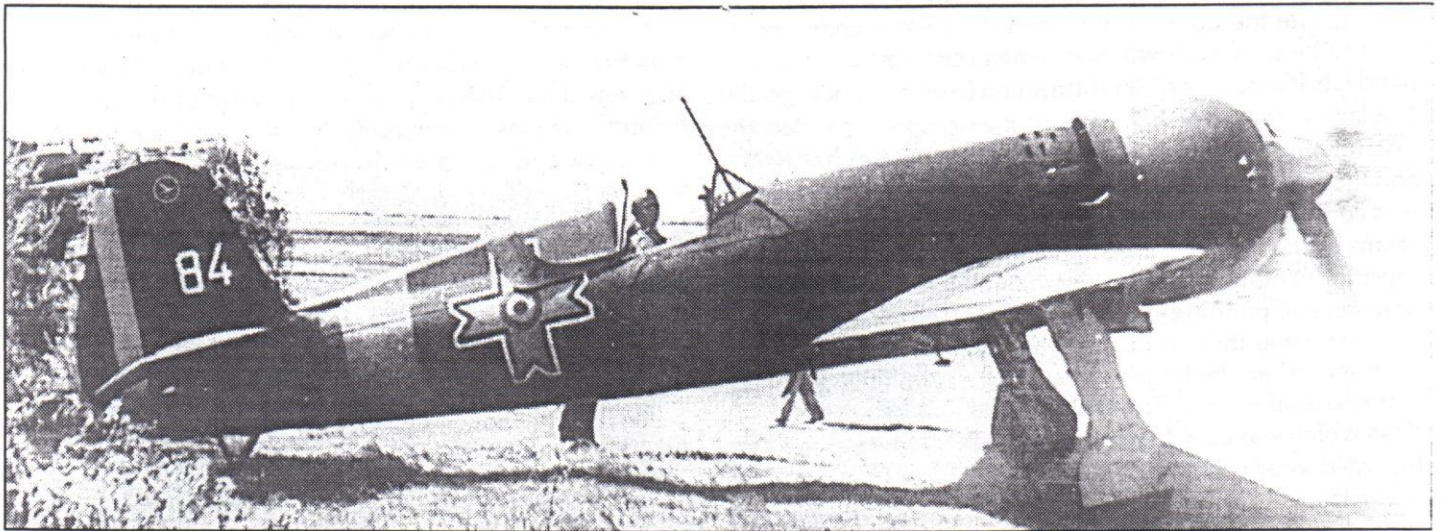
replaced. The masking of the fin flash did not go well, with some seepage under the mask. Other than that, the technique I used was a success.

I also was able to get the *Aeroclub* canopy cut away from its sheet without destroying it. After some fine trimming to get it to fit, I dipped it in Future and set it aside to dry. I then masked off the framing, painted it white, and attached the canopy with white glue.

The white metal undercarriage had a bit of flash, which cleaned up easily enough. The nose gear is a single piece, but the mains have tires separate from the leg/oleo/mudguard assemblies. The main legs have a flat mounting surface at the top, which makes for good CA bond, but positioning and alignment of the mains is tricky. The nosewheel mounts with a post; I adapted the hole for the kit nose gear to take this post. Regrettably, despite the white metal nose wheel and the fifteen or so BBs I put in the front fuselage, the model sits on its tail; I will probably attach it to a base to solve that problem.

Once the gear was on, the last assembly step was to attach the various gear doors (seven in all). I then had a few spots to touch up before calling it done.

All-in-all, this was a fun kit, and certainly one where the aftermarket material greatly enhanced the end result. Since I've got that F.1 canopy, maybe I ought to do another one.



An IAR-80 runs up its engine prior to a flight. The home-grown IAR-80 held its own against numerically superior Allied planes until it was replaced by the Bf 109 in 1944. Even then, a number of examples survived and were used for training until about 1950.

## Fighter, made in Romania: MPM's IAR-80

By Mark Schynert

The Romanian IAR-80 was a rarity in World War II: a low-wing monoplane fighter with retractable landing gear designed, built and put into mass production by a relatively small combatant nation. It was a "clean-sheet" design, apart from the use of the aft fuselage and tail of the PZL P.24 gull-wing fighter. It served throughout Romania's involvement in WWII, 461 examples being built in all, and continued to be used postwar.

Given the IAR-80's historical importance, the MPM kit is a blessing. Previously, if one wanted to build an IAR-80 in 1:72, the choices were the ancient *Formaplane* vacuform, another vacuform by *Airmodel*, a *Pegasus* limited-run injection kit of questionable accuracy, or a *Czechmaster* resin kit. Out of my inability to find anything better, I was resigned to building the *Formaplane* kit, and was on the verge of starting when MPM came through.

The kit consists of a sprue of 29 limited-run injection parts in very light gray plastic with fairly delicate engraved panel detail, a very nice injection canopy, a small fret of photo-etch brass, a black film instrument panel backing, a *Propagteam* decal sheet, 21 pieces of resin (consisting mostly of components for the propeller and *Mistral Major* engine), and a reasonably competent seven-page instruction booklet. The builder is expected to scratch-build the six guns and pitot tube. At first inspection, all components appeared to be usable. The worst problems were the usual prominent injection gates of a limited-run kit, and injection posts on the inside of the major components.

In constructing the kit, I relied on four sources: the July 1976 issue of *Air International* (bound Volume 11, pp. 31-36), the May 1990 issue of *Air International* (bound Volume 38, pp. 238-247), *Rumanian Air Force: The Prime Decade, 1938-1947*, by Denes Berned, published in 1999 by Squadron/Signal, and the monograph *IAR-80/81* by Konarski & Pecko, published in 1991 by Hawk Publication. The last, entirely in Polish, comes with a detached 1:24 scale 6-view of the IAR-80, and is otherwise in a Squadron/Signal "In Action" format. The last reference is the best of the four, though none of them have

great cockpit detail, nor do any of them show the wheel wells. These sources reveal that the kit will build an IAR-80A if no modifications are made, and can be modified to an IAR-80 by the simple expedient of filling some panel lines in the wings—adding a couple of lines on each wing and omitting the dust filter. Being inherently lazy (and since I liked the marking scheme the best), I opted to build the kit as IAR-80A no. 109.

The first thing I did was grind down the sixteen injection posts studding the inside of the wings, fuselage and cowling with a Dremel Mini-Mite mounting a 220 grit sanding drum. I then separated these pieces from the sprue and did an initial dry-fit to see what I had. At once I saw that the trailing edges of the wings were too thick; sanding both the top and bottom wing pieces greatly improved the look. The fuselage halves also needed sanding, both to obtain a good mating surface, and to reduce the thickness of the rudder trailing edge.

The cowling halves were admirably thin, but correspondingly difficult to assemble. Although overall the cowling was in round, the cowl opening was not, and the thin sides made the use of solvent challenging. The seam on one side was quite prominent because I had trouble lining up the narrow bonding surfaces. After it thoroughly dried, I sanded out the seams. Rescribing of lost panel lines proved necessary as well. The cowl opening required some filler to bring into round.

After attaching the separate upper wing pieces to the continuous lower wing piece, I dry-fitted this assembly to the taped-together fuselage halves. Or tried to, anyway; the fuselage wing root fillets were too wide. I consider this easier to deal with than the alternative of gaps at the wing roots; careful sanding of the root fillets and the fuselage underside extension of the lower wing piece eventually resulted in a reasonably good fit, although other circumstances caused problems later.

I now separated the taped fuselage halves to work on the interior. The photoetched fittings, resin control column and plastic parts build up to a total effect which looks quite nice, and is reasonably accurate. However, the interior components could have been better engineered. Tabs are provided on both fuselage halves to anchor the cockpit floor, but these

do not align with each other. Use the left side tab; the right side tab will site the floor too low, and the cockpit components need to be shaved down even when conformed to the left-hand tab. It took a lot of dry-fitting and Dremel work to get the fuselage halves together without major gaps. I painted the instrument panel black, seat belts khaki with black hardware, and the rest of the interior a light gray. Once the interior work was complete, I mated the fuselage halves, and reduced the seams in the area of the aft fuselage, which were fairly bad topside but minimal underneath. I did this now to prep for the first stage of painting.

Next up was the engine. The Mistral Major is a fourteen-cylinder radial; the kit provides fifteen cylinders and the crankcase, all in resin. The individual cylinders had some flash which was easy to remove, and after that, assembly was deceptively straightforward, using super-

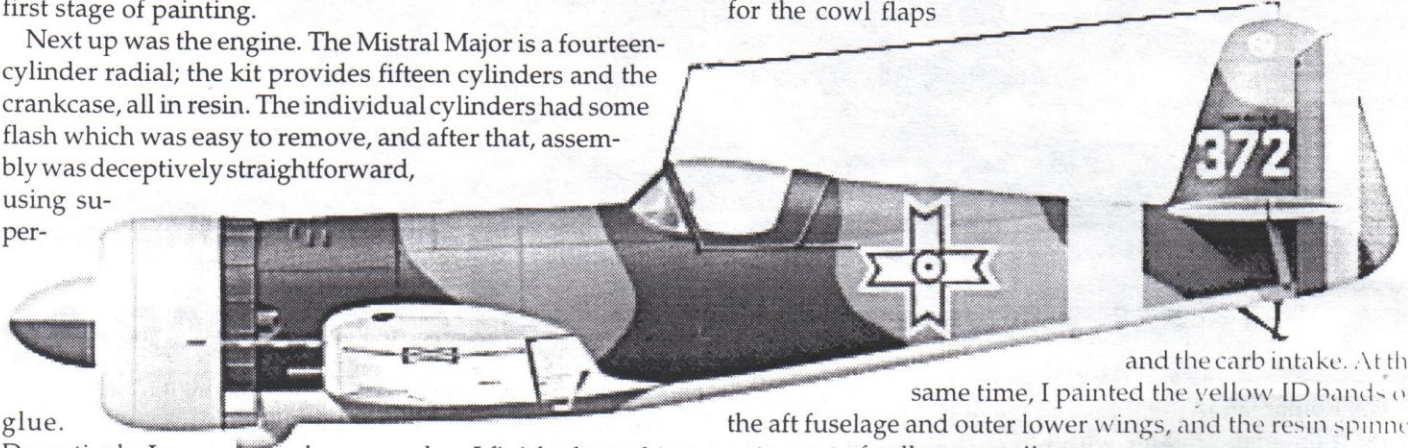
glue.

Deceptively, I say, because when I finished attaching the front seven cylinders, I found the engine would not fit inside the cowling! The base of each cylinder needs to be sanded down almost to the point where it begins to get wider, although that still may not be enough; I would expect that the tops of the cylinders would also have to be ground down at least to some extent to squeeze the engine inside the cowling. As I had acquired a resin Russian M-88 (essentially the same engine, built under license from the French) by *Engines and Things* to put into the *Formaplane* kit, I decided to use it now instead of trying to debond the superglue and fix the kit engine, but even the M-88 wouldn't fit until I sanded off part of the poppet assemblies from the top of each cylinder, removed 3mm from the hub, and about half of the accessory area behind the engine. Doing it this way still seemed to be less trouble than messing with the kit engine, and the *Engines and Things* piece looks better, though the kit version is acceptable if you can get it to fit.

Again dry-fitting the fuselage to the wing, I found the appearance of the wheel wells to be less than inspiring. The serious modeler will have to box off the gear wells himself or live with an unrealistic up-the-kilt look; a rectangular piece without detail provided in the kit for this purpose is too small to be effective. Unfortunately, I could find no decent photos of the wheel wells, so I had to fake it with some sheet styrene. And once that was done, I had to perform some moderate surgery to the underside of the fuselage in the wing root area to get a barely acceptable dry fit.

Back to the cowling. The kit provides a trifold piece of brass for the under-nose dust filter, which gives it a nice thin-walled look from ahead. However, this is only standard for the IAR-80A; few if any IAR-80s had it. The carburetor intake in line behind it is plastic; blending the brass and the plastic will require careful filling work. Also, there is a quarter-round void between the lip of the carb intake and the fuselage, which I drilled out, first with a #55 bit, following with a #50 bit, and a sharp X-Acto #11 to square off the corners.

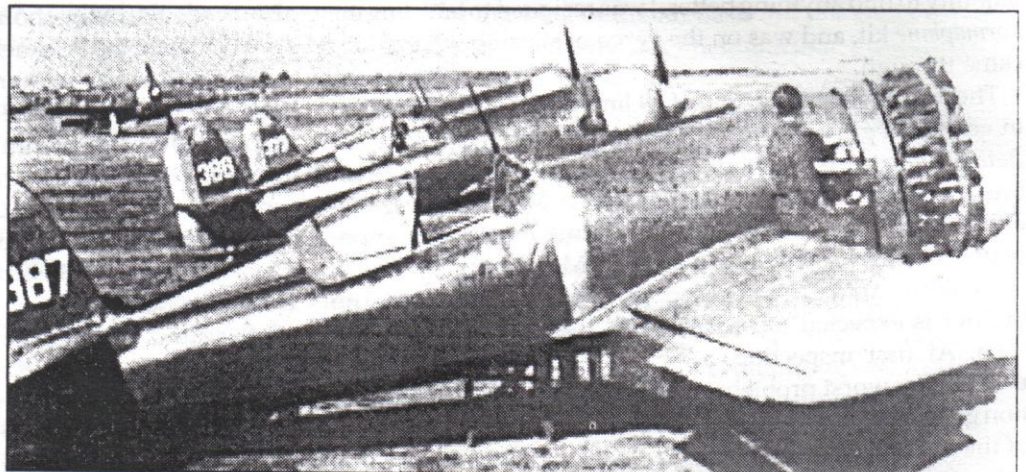
I airbrushed the entire cowling yellow, except for the cowl flaps



and the carb intake. At the same time, I painted the yellow ID bands on the aft fuselage and outer lower wings, and the resin spinner got a coat of yellow as well.

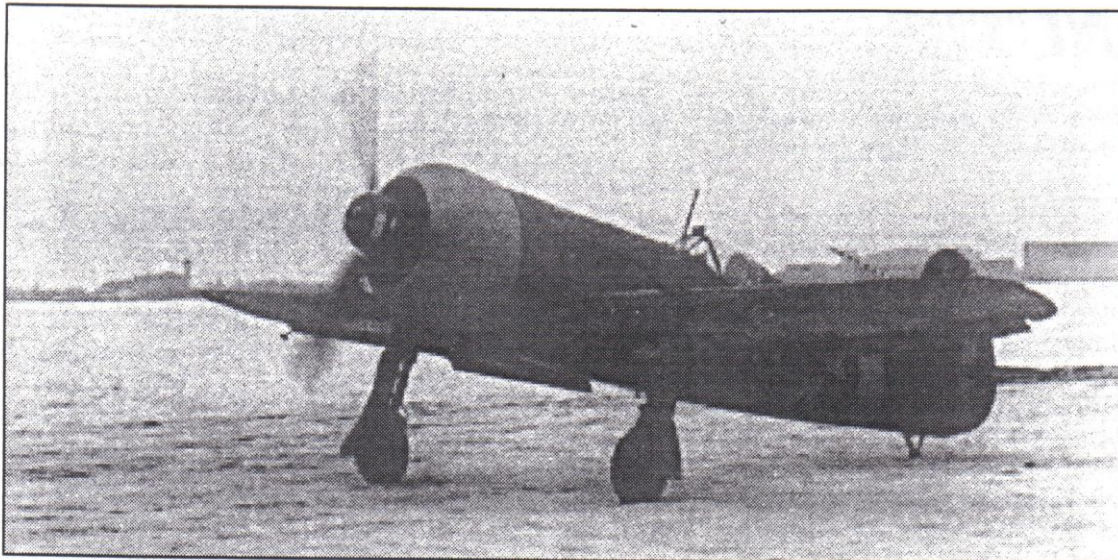
The propeller blades were also resin; four were given to make the three-blade prop. The instructions were not clear on setting the pitch of the blades, but my references were adequate to resolve this. The propeller assembled reasonably well.

Now I mated the major components: engine, wings and fuselage. The engine mounting is tricky, as there are no guides to center it, and I had the non-kit engine anyway; I popped the thing on with superglue and immediately fit the cowling over it to see if it lined up before the glue set completely. Epoxy,



The IAR-81, seen here, was a dive bomber/fighter that varied very little from the IAR-80.

with its greater working time, may be a better choice. As it was, I had to snap the engine off twice and recontour the mating surfaces before I got an acceptable result. The wing did not mate well with the fuselage either; although either the front or the back of the underfuselage wing section lined up fine, they didn't do so simultaneously. I glued the aft area together with superglue, and after it set, I forced the forward



**Under miserable conditions, an IAR-80 taxis across a frozen lake to begin a mission. The IAR-80 was employed against both bombers from the RAF and USAAF and tactical aircraft belonging to the Soviet Air Force.**

part into conformance, used superglue and clamped it. This almost worked perfectly; I was left with severe seams between the cowling and leading edge of the wings on both sides, but that was less trouble than I would have had if the back had not conformed well, both because it was easier to fix and because part of it was covered by the cowling.

Once I cleaned up the various seam problems and rescribed lost detail, I painted the engine with a thinned black for the cylinders and stainless steel for the hub, then turned to the stabilizers. These butt-join to small fillets, but the fit is poor; the inside edges of the elevators hit the fuselage before the join can be made flush. Fortunately, this is easy enough to remedy. After taking care of the resultant seams, I was ready to paint.

As the cowling had not yet been attached, I masked off the bare engine, cockpit, wheel wells and yellow ID bands. The top color scheme was an olive green and dark terra cotta combo; I used U.S. Olive Drab and French Earth Brown; the underside color was reminiscent of RLM 76, so I used that. The instructions provide color equivalents, but I could not verify their accuracy.

I hand-painted the canopy frame, after the whole canopy was dipped in Future and allowed to dry overnight.

I gloss-coated with Future, prior to decaling. The *Propagteam* decals were very thin and delicate; exercise great care, especially with the rudder tricolors, which were troublesome to get into position, and unfortunately are also insufficiently opaque for all three colors! If I were to do it over again, I'd paint the rudder white beforehand. As it was, I had to touch up the rudder markings. The national insignia had no such problem, and making the small red rings separate decals to overlay on the yellow crosses avoided registration problems. The only decal I added to those provided in the kit was a black dot to simulate the hole at the tip of the propeller spinner.

Once the decals were in place, I did another layer of Future and dull-coated. Then I added the landing gear. The oleo retraction struts are the worst injected pieces of the kit, and should be replaced by plastic rod. Note that the landing gear doors need to be cut into two pieces each before mounting, though there is no hint on the plastic where to cut, and the drawings are pretty vague. Still, it wasn't difficult. Apart from

that, the gear assembled and mounted easily though there were no guides to assist in the gear attachment.

The kit provides neither gun muzzles nor pitot tube; again, use rod (the instructions provide dimensions.) The pitot needs to be painted first, as the red/white (or black/white—the references differ) stripe pattern is less trouble to put on while the pitot is not part of the airplane. The cowling and four exhaust pipes went onto the body of the plane now; I had

previously drilled them out. I then tried to attach the photo-etched aileron mass balances. Evidently *MPM* foresaw that I would have trouble with these parts, as they provided six mass balances when only four are needed, but they failed to foresee that I would lose four of them while attempting to attach them! The kit looks nice even without the mass balances, though I'm sure it would look even better for those of you not so coordinationally challenged.

Finally, I attached the cowling, the propeller and the canopy. I then filled some gaps around the canopy with superglue and touched up the paint. The antenna presented an interesting problem; it should actually go through the right side of the canopy, but this entails drilling a hole in the canopy (something the instructions only imply) and I thought this was an RBI (Real Bad Idea). Instead I, shortened, painted and attached the antenna to the outside with superglue, then added the antenna wire and lead, which I fabricated from .05 rod. The canopy required a great deal of work before it would fit as it should, and I should have shortened the back of the prop hub to take into account the change in engine components—the way I built it, the whole prop sticks farther out than it should. But at this point, I was done.

So how accurate is the kit? There are a few minor errors. The rudder trim tab is too small, there is a fairing aft of the carb intake which is left off, a floor-mounted set of instruments is omitted from the cockpit detailing, the kit engine lacks poppet rod detail (another plus for the *Engines & Things M-88*), there is no rear-view mirror mounted at the top of the canopy and no gunsight is included. I consider these trivial errors, and for the most part easily correctable for those who care. Dimensionally, the wingspan of the kit is right on for the short-span variants depicted in the kit, and the fuselage is also correct in length. There are no obvious shape problems either.

This kit can be built into an accurate representation of the IAR-80A if the builder has at least moderate skill. It has its troublesome moments, particularly with the engine and the gear bays, but the total effort is about what I would have expected for an *MPM* limited-run injection kit. I'm happy to be able to add this one to my collection of obscure WWII fighters.

# JUNE MINUTES

At the June meeting, there was almost no business to speak of. We had a brief rundown of the Regional in Fresno, the Silverwings contest and the Chino show, and leapt right into model talk.

Newcomer Tang Le showed off a couple of Tiger Meet jets, including a Luftwaffe Tornado IDS from the *Airfix* kit in 1994 markings and an F-16 built out of the box from the 1:48 *Revell* kit. Dave Balderrama wants to build a model of the starship *Enterprise*, and is collecting books before he starts to build. Dave's probably closer to building a resin figure of Gort from the movie "The Day the Earth Stood Still," which he picked up through *Monsters In Motion*. Sami Arim's 1:700 H.M.S. *Hood* cruised to a Best of Show award at the Sacramento event. Sami replaced all the anti-aircraft weapons with photoetched parts, made new masts, added webbing under the cranes and spruced the model up with *White Ensign* brass parts. Bert McDowell's got some brass—and he brought a tool to fold it! The tool's called the Hold and Fold, which Bert says works well; its price is a little high, he says, but if you're folding a lot of brass parts it could be worth the cost. David Driedric took a familiar subject, the PT-17 Stearman, and put it in Israeli markings. David's Stearman came from the *Revell* 1:72 kit. Roy Sutherland's Fw 190A-1 conversion won its category at Chino and Fresno; his next long-term project is a *Mosquito* NF.13 built from the *Tamiya* kit, featuring a scratchbuilt interior and a few bits from *Eduard* brass sets. Last month's cover subject was the Northrop Gamma; inspired by the article, Bob Miller brought in his Gamma, depicting Lincoln Ellsworth's 1934 South Pole exploration plane. To put the *Williams Bros.* kit on floats, Bob poached the pontoons from a *Hawk* 1:48 Ryan PT-22 and built his own strut structure. The author of the story from last month brought in his own Gamma, although Mike Burton opted to do the famous "Sky Chief." Mike has finished the sixth plane in his Tuskegee Airmen collection, a *Heller* AT-6 finished in the base's markings, and has a trainer of a different stripe—a Yak 11 Moose from the *Waku* vacuform kit. Robin Powell used sandpaper, superglue and a lot of elbow grease to convert *Academy's* Hunter into a Suez Crisis F.5. Robin reshaped the nose, added a new tailpipe, a *Cutting Edge* cockpit and a *Cooper Details* seat, and sanded the dogtooth edges out of the wings to backdate his model. Vladimir Yakubov finished *ICM's* massive TB-3 in dark green camouflage; the detailed gun mounts came from an *Extratech* brass detail sheet. Bob Miller displayed an F4F *Wildcat* model, made more than 50 years ago. It was a cardboard model, as sold during World War II. Bob also had the parts present for an SO3C *Seagull* and an Me 110, both of which were approximately accurate! Mark Schynert's *Meteor* F.Mk.3, which graces the pages of this issue, was present; it went from a tail-sitter to a nose sitter when Mark drilled a small hole and inserted nine additional BB's! Mike Braun fought his way past some fit problems to complete *Tamiya's* F4U-1A *Corsair*; he says it's a nice kit despite its foibles. Richard Draga's hover tank from "Star Wars Episode One" now has a complete interior, thanks to Richard's detailing efforts. Ken Durling has made seat pads for his *Aermacchi* MB 339 from scratch, and he plans on adding lots of other touches to his 1:48 *Fremis* kit. Ken wants to finish the model as a Frecci

Tricolore aircraft. Ken also has a 1:24 GTO under way, and he's just added the carburetors and other engine details to the car. Charles Lamb used *Testors Model Master* paints to add some colors to his Bf 109, built from the *Fujimi* kit. Ben Pada was his usual succinct and modest self, placing a lovely *Hasegawa* F-86F *Sabre* and a *Tamiya* P-51D *Mustang* on the table and saying precious few words about them. Greg Prindle took *Hasegawa's* huge 1:32 F-104 *Starfighter* and finished it in the gaudy markings of Col. George Laven. Matt McMackin's ground forces included *Tamiya's* GPA "Seep" amphibious vehicle, built straight from the box, an *Airfix* Mk. I Male tank his son assembled, and an SdKfz 253 *Sonderkommando* from the *Italeri* kit. Also on the table from Matt were an *Airfix* *Fairey Seafox* and a *Lindberg* *Stearman*, which Matt said was so frustrating it could be his last biplane! Steve Travis used 22 coats of paint—on an airplane! Steve turned a Bf 109 into a Mooneyes-sponsored air race (Me is an abbreviation for Mooneyes, right?). Steve clipped the wings, removed the radiator scoops and rescribed the model, only to putty the panel lines for a smooth finish! N109 now awaits our next air racers event. P.A. Aguirre used a soldering iron to modify his 1966 stock car into a roll-over damaged 1966 stock car! Bruce McBride's latest model is combustible, vulnerable and expendable—it's *Bluejacket Models'* escort carrier *Gambier Bay* (CVE-73), and it's very large (1:87). Bruce's daughter used some patterns in a book to make paper models of a *Stegosaurus* and a *Triceratops*, which looked right at home atop the escort carrier's hull! The verdict from Frank Babbitt on his *Pioneer* BAe *Hawk* is all bad: it's a very poor kit that's required a lot of reshaping, he said. Hopefully, you got a good look at it at the meeting, because he's going to take a break from it for a while! Greg Plummer's '65 *Chevelle* is going to be a "surfer mobile;" all that's missing now are the grille, the bumpers and the hood. Greg is also making short work of the *Revell* X-90 *Ekranoplan Eryonik*. Laramie Wright has added a mess of brass to his M4A3 *Sherman*, and only a power failure kept him from painting the model in time for the meeting! Laramie also has two planes in the works: a P-400 *Aircobra*, built from the *Monogram* 1:48 kit, and a *Hasegawa* 1:72 *English Electric Lightning*, a model Laramie first built in 1976. This time, he rescribed the model and is getting ready to apply a three-tone gray paint scheme. Ron Wergin says the new *Italeri* *Ratale* is a good kit, but it has bad instructions! Ron showed this stylish jet off, along with a *Titan* missile in 1:144 from *Real Space Models*, an *Italeri* SdKfz. 234 *Puma* in 1:35, and a trio of British Commonwealth desert fighters: a *Hurricane* IIb from *Revell*, a P-40M from *Academy*, and a P-40K from *Kovosodny*. On the latter, Rob re-did the propeller and the wheels. Cliff Kranz likes the "Space Cruiser *Yamato*" series so much, he built the ship! Cliff built the *Yamato* 2520 and used the show as research material for the colors. Randy Ray's *Tamiya* *Stevr* was a winner at the Fresno regional contest, and now he's working on a 1:72 *Spitfire* PR.IX, using the *Italeri* kit as a basis and adding an interior from *Cooper Details*. Randy will finish his photo-*Spitfire* in a coquettish pink. And the model of the month goes to... P.A. Aguirre's giant, scratchbuilt *RX-100* Maximus motor home/race car hauler! P.A. started work on this behemoth 20 years ago, building the sides out of airplane

plywood and finishing the interior right down to the pot roast in the oven. This monster would have been 11 feet wide and 60 feet long, powered by a GT404 turbine engine, and would have carried a race car and team in comfort. P.A. used the design to win a contest in high school, which led him to

become an engineer and to go to work for General Motors. At the meeting, he announced that he's taken a permanent sabbatical from Apple to become a full-time modeler, since he hasn't been able to sit down and build in all that time. Congratulations, P.A.!

## SVSM BOOKSHELF

*Courage Alone: The Italian Air Force 1940-1943*

By Chris Dunning

Hikoki Press, 1998

Hikoki Publications has produced another fine book. The Regia Aeronautica has received only spotty coverage in English-language publications up to now; *Courage Alone* fills the gap admirably. At long last, there is a book which, in the course of 272 pages, gives a comprehensive, unit-by-unit history of the wartime Italian air force.

This hardcover book has actually been in process for more than a decade; the same author wrote *Combat Units of the Regia Aeronautica* (published by Air Research Publications) in 1988, but it was only the first 48-page volume of a planned two-volume work. Regrettably, the second volume was never published. It is evident from a comparison of *Courage Alone* and the earlier work that all of the earlier material is included, in most cases verbatim.

*Courage Alone* presumably includes all of the phantom second volume as well, but the much greater size of the new book implies that the original series might have stretched out to six volumes. Instead, it's all here under one cover: chronology, command structure, unit histories, Squadriglie allocations to Gruppi, orders of battle, the aircraft carrier *Aquila*, anti-shiping operations, aircrew, fighter aces, aircraft types, aircraft equipment, camouflage, aircraft markings, and a commentary on why the Regia Aeronautica was defeated. There are also fifteen pages of color profiles, in 1:72 and 1:96, and a color page for unit badges.

The only real deficiency is that there is little data on the aircraft themselves, but the photos and artwork are first-rate. Taken with the venerable *Italian Civil and Military Aircraft 1930-1945* (Jonathan Thompson, Aero Press, 1963), the enthusiast will have a complete basic reference for the Regia Aeronautica in World War II.

—Mark Schynert

*F-84 Thunderjet Units Over Korea*

By Warren Thompson

Osprey Publishing, 2000

Warren Thompson is staking claim to title of the official historian of the Korean War, with a host of books on the conflict already in print. This volume, along with a similar edition covering F-86 *Sabre* fighter-bomber units, is more evidence of this. In his text, Thompson provides a detailed,

riveting account of the *Thunderjet* in action from its arrival in-theatre in 1951 to its final bomb run two years later, sprinkled with personal accounts of the air war. While many see the F-84 as a mud-mover, the types of missions assigned make it clear that the Air Force thought the F-84 could hold its own in air-to-air combat, and the tales from the pilots show that they had plenty of opportunities to prove it could. Low, clean and with speed, as the F-84 was at the end of its bomb runs, the *Thunderjet* was a better fighter than the MiG-15, and the planes scored 11 confirmed kills, all during 1951, although the F-84 damaged MiGs later in the war without gaining credit for kills.

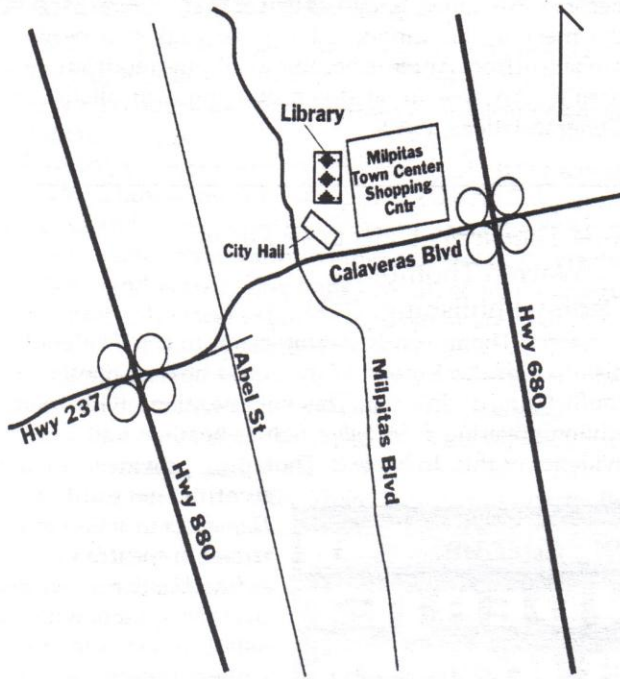
As good as the text is, the photos are what will interest the modeler. The book is packed with color photos that illustrate unit markings,

nose art and the environment in which the F-84 worked. Several familiar decal subjects—"Four Queens," "Buzzy McGoo," "Night Takeoff"—are here in the flesh, and those wishing to capture the quality of the natural metal finish accurately will be overjoyed to see the patterns of the panels illustrated clearly. Diorama builders will also find a wealth of information to help them finish the figures and scenery of a Korean War vignette (although they may find the almost universal use of PSP somewhat off-putting!).

Whether you're looking for a brief history of the F-84 in combat or a scrapbook of great color photos, this book fits the bill.

—Chris Bucholtz





**Next meeting:  
7:30 p.m.,  
Friday,  
July 21**

**at the Milpitas  
Public Library**

**40 N. Milpitas Blvd.**

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