

THE LEADING EDGE

NEWSLETTER OF MUROC EAA CHAPTER 1000

Voted to Top Ten Newsletters, 1997, 1998 McKillop Award Competition

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<http://www.eaa1000.av.org>

March 2013

Chapter 1000 meets monthly on the third Tuesday of the month in the USAF Test Pilot School Scobee Auditorium, Edwards AFB, CA at 1700 or 5:00 PM, whichever you prefer. Any changes of meeting venue will be announced in the newsletter. Offer void where prohibited. Your mileage may vary. Open to military and civilian alike.

This Month's Meeting:



Caudron C.460 Racer

Mark Lightsey

Tuesday, 19 March 2013

1700 hrs (5:00 PM Civilian Time)

USAF Test Pilot School Auditorium

Edwards AFB, CA

Ah, the golden age of aviation, when everything was so new and exciting. When you had a fighting chance of coming up with a new idea that hadn't already been rejected by Lockheed, Boeing, and most college aircraft design programs. When the government was so far behind that civilian race planes (and bombers) could outrun the front line fighters of the day. It was truly a wonderful time to be in aviation, assuming you could ignore the problems with keeping the oil inside of the engine, avoiding structural failure of reciprocating parts, electric propellers that listened to the pilot as much as teenagers listen to their parents, airplane parts that would abruptly break off due to something called "flutter", or the fact that you needed more than two hands to count the number of people you knew who had been killed in some horrific aviation accident.

Yes, the problem of remembering the halcyon days of yore is that we tend to remember the wonderful stuff and conveniently forget all of the reasons that engineers slaved hard to make our current world a better place. But what if

you wanted to experience what it was like to do those fun things in the past? You could do like **George "Knife" Gennuso** and restore your hopped-up GT Mustang and relive your glory days of the '60s, ignoring the fact that the car still drives just like a car from the '60s and it still drinks as much gas.

But if you don't have something from the past to restore, you can always just build it. Replicas of many of the Golden Age air racers have been built down at Flabob International Airport. One of the most recent examples was built by our speaker this month, **Mark Lightsey** of Aero Craftsman Inc. He built a replica of the **French Caudron C.460 racer**. This was from the era when the design paradigm was to take the biggest engine you could find and put the smallest possible airplane around it. The airplane gained fame at the 1936 National Air Races in Los Angeles, when it shocked its American counterparts by sweeping both the Greve and Thompson trophies. This replica is so popular that it was displayed at the Paris Air Show in 2009.

Come out on 19 March and hear Mark's stories about what it is like to take 80 year old drawings (assuming he had any) and try to figure out what they were thinking all of those years ago. After an enlightening presentation we will proceed, as is our custom, to the **BK Dead Cow Emporium** where we will discuss and dine until everybody's **Grease Low Level Light** is extinguished.

- For the Vice Kommandant **Hellmuth Steinlin**

Dues Delinquents!



According to the *Project Police Bylaws* (as amended), **March** is the month when **Evil Editor Zurg** collects and publishes the list of names of the **Ne'er-do-wells** amongst our fold who are **slacking** and **sponging** off the rest of the **PPOs**, thinking somehow that the magic dues fairy will show up at the chapter to pay their dues. That's right—it's the dreaded **Dues Delinquents** list! The punishment of public humiliation by confrontation has been very successful at getting those slackers to pay up (\$20). This year's list of slackers is long and undistinguished (current as of 5 March 2013):

(So, you're looking here to see if your name is on the list? The simple fact you are looking here tells **Evil Editor Zurg** that you are not sure that you paid your dues this year. Therefore, get out your checkbook (or step to your computer) and pay up **NOW!** Lucky for you, you were spared public embarrassment by sequestration, since **Evil Editor Zurg** was forced to take a furlough day at press time and thus couldn't assemble the list o' ne'er-do-wells. However, Zurg is working on a strongly worded e-mail that will bring embarrassment upon you and your kin. Avoid the horror and just pay now (you can do it by Paypal at <http://www.eaa1000.av.org>) and we'll credit you another year if you had already paid this year. See, that wasn't so bad. The pain will go away shortly.)

Last Month's Meeting

EAA Chapter 1000

USAF Test Pilot School, Scobee Auditorium
Edwards AFB, CA
19 February 2013
Gary Aldrich, Presiding

The February meeting was held the Edwards AFB Test Pilot School auditorium with **Kommandant Aldrich** presiding. Twelve members were in attendance and enjoyed pre-meeting goodies provided by **Shmoozemeister Tuki**.

Our guest speaker for the evening was **Richard Fraser**, engineer and founder of the **Fraser Aero Technology Company** based in **Orange, California**.

Dick provided a great presentation on **Henri Mignet's** (pronounced Min-yay) **Flying Flea** design, or "**Pou du Ciel**", a name created by the French news media and not by Mignet.

Dick provided a model-by-model description of each of Mignet's designs. I'll hit the highlights, but you can see them all by visiting his website at www.fraseraerotechnologycompany.com.

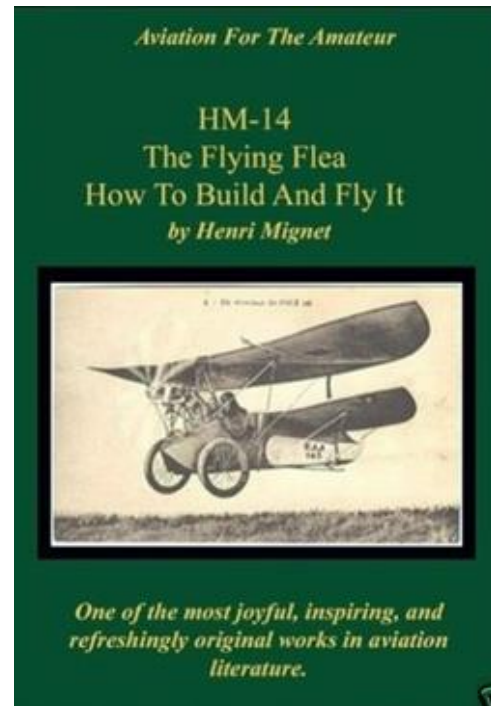
Henri's first aircraft was the HM-1-1 glider in 1912. The first of his aircraft to be considered a **Pou du Ciel** was the HM-11 triplane of 1931. The HM-14 (Le Pou du Ciel, Final Formula) first flew on 10 September 1933. On 13 August 1936, he flew the HM-14 across the English Channel. By one estimate, 500 HM-14's were under construction in Britain by 1936.



HM-1-1 Monoplane



HM-11 Triplane



The HM-14. Download an English translation at http://www.pouguide.org/uploads/HM14/HM14_Book.pdf

1909-1935! As then is now, a French pioneer crosses the Channel in a machine of his own creation. St. Henri Mignet in his "Pou-du-Ciel" approaching Poolestone on August 13th.

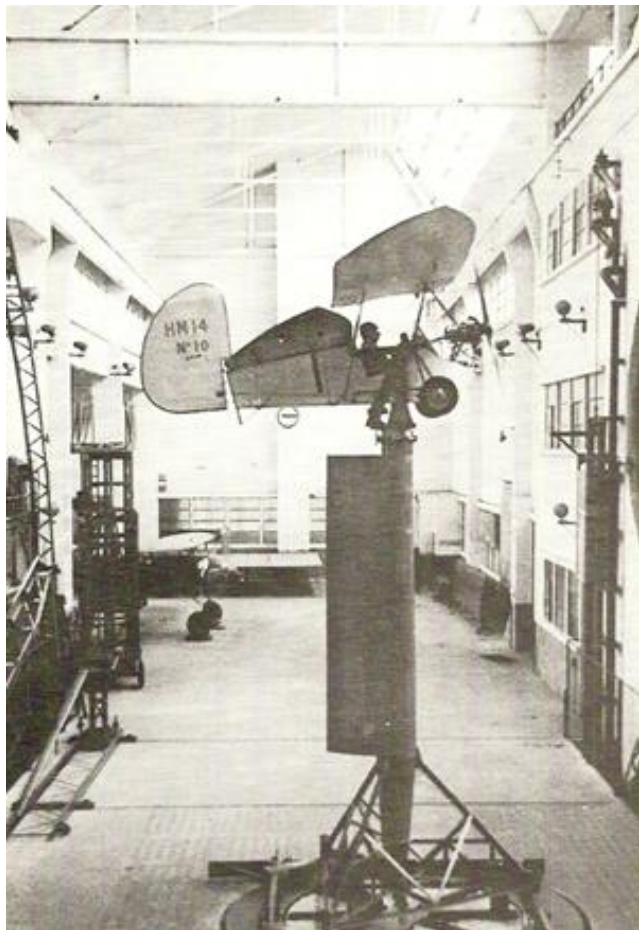


L'AUTRE AVIATION
Henri Mignet Flies in England : Air Ministry Test Suggested
By C. N. GILSON

Henri Mignet flying the HM-14 over the English Channel

By 1937, Mignet established the American-Mignet Aircraft Company in Chicago. In 1944, the French Army ordered the model HM-280 Pu-Maquis to be used by the as a liaison aircraft. The HM-280 had folding wings and a

more robust landing gear for transport and operation in rough terrain.



HM-14 in a wind tunnel. The French government required testing and modifications to improve safety



HM-280 Pu-Maquis with wings folded

Mignet moved to Argentina in 1947 and continued with additional designs and production, with the aircraft growing to a 3-place model, others with enclosed cabins. By 1956, Mignet had moved to Casablanca, Morocco and produced the HM-320 and HM-350, the latter with a 65HP engine.

Mignet died of cancer in 1965 at the age of 72. He had completed 37 designs, with all but 2 produced. His

children continued promoting his work and became "Associates of the Company Societe d'exploitation des Aeronefs Henri Mignet (SEAHM)" in 1984. In 1999, Henri Mignet was entered into the EAA Hall of Fame in the US.

Dick showed many pictures of Mignet designs produced by homebuilders the world over, as well as derivative designs including twins, jets and a "wave jumper".

Kommandant Aldrich concluded the meeting, suggesting that no furtherance of aviation could be accomplished on an empty stomach. A hasty "victory" was declared and most adjourned to the **Dead Cow Emporium** where Dick was "Supersized" in appreciation.

Most of this is true.

- **Kent Troxel**

Chapter 1000 Minister of Propaganda

Kommandant's Korner

It was a dark and stormy night...

Well, at least it was when I typed this. A late-winter storm has dropped some of that "Freezy-Skid-Stuff" (who's old



enough to recognize that reference?) in the local mountains. The attendant chill factors have made it quite easy to avoid visiting the **Fightin' Skywagon** in her (unheated) hangar. My attempts to fly in my day-job have also suffered this week, cancelling two for two for various forms of inclement weather. I don't know at this point whether March is "coming in like a lion" or what, but I am ready for the temps to climb into the 60's (at least) and maybe some light winds. Now that all my excuses are laid bare, you can understand why I don't have some educational and/or entertaining aviation adventure to regale this audience.

Rather, I'd like to comment on the performance of our newest **Vice Kommandant, Herr Hellmuth Steinlin**. Despite what it says on the Chapter website (hint, hint, hint) (*I don't know what you're talking about...check again moosebreath...*), **Hellmuth** has held this critical leadership position since he was elected by acclamation way back in December 2012. Even before volunteering, **Hellmuth** was charging forward to discharge the most important duty of the **VK**...that of securing interesting, educational, and entertaining programs for your viewing pleasure. This is not an easy task, as our demographic tends to be composed of highly educated, extremely technical, and anything-but-shy "**wingnuts**" (and I use the term in the most flattering way).

As a result of his tireless efforts, we've had war heroes, aviation celebs, pioneering inventors, famous aviation artists...wow! **What we haven't had is good attendance**. It doesn't take a rocket scientist (I think we have one or two) to realize that soliciting speakers and

programs for such a competent group of aviators as you is not a trivial task. And, when 1730 on the third Tuesday of the month rolls around and the modest TPS auditorium sports seven or eight of the “usual suspects” it has to make one wonder if it was all worth the effort. This discounts what we must look like to a guest speaker who has labored over a presentation, driven close to a hundred miles, and fought their way through the crack Edwards Security Forces base access system. Suffice it to say that even a super-sized meal at the **Dead Cow Emporium** is likely to leave the guest merely “whelmed” with what once was touted as the sharpest Chapter in all EAA-dom. I know that if you’ve spent a long day helping to test the weapons of war it’s easy to elevate a cold beverage in front of the fireplace over a **Tuki-cookie** with your fellow aviators. I also know that the drive out to the base, with its attendant grilling at the gate can dampen the enthusiasm. But, dang it, we ARE the “**Chapter with the most zeroes**” and proud of it. Let’s show that pride by supporting the efforts of your **Vice Kommandant** and get on out to the meetings. The alternative is not attractive...**Hellmuth** loses the “fire-in-the-belly” attitude, programs decline, attendance (further) declines...and all that’s left is this monthly email...or not.

When I first joined the Chapter, attendance was taken at the meetings. At the time I dismissed this as standard engineer OCD behavior, but I am beginning to think it could have contributed to attendance at the meetings. **Mrs. Kommandant’s** organization has meeting attendance requirements that must be adhered to under threat of an elaborate fine system and/or an invitation to resign. I prefer the carrot to the stick, myself, but if one doesn’t work maybe we need to explore the other. See you at the meeting?!?

- Gary Aldrich
Kommanding

P.S. If this rant has struck a chord and you have a (constructive) comment as to the solution for our lackluster meeting attendance I’d be thrilled to hear it.

(funny...I thought he preferred Tuki-cookies...)

A True Flying Flea Story

19 June 1940, 0500 hr. Lessay (France)

A day earlier General De Gaulle invited all French people to join him in London. Earlier, Marshal Petain had announced the surrender of the French Forces to Germany.

I decided to steal an aircraft despite my low flying time of 4 hours. I knew that I could take off. When time came for landing we would improvise.

The hanger was empty, all aircraft having been taken by the Military. But, in the corner I noticed a strange thing covered in dust, spider webs and assorted deposits. My instructor had told me that it was a Flying Flea that had been flown from England for an airshow and got damaged.

Its owner went back home by boat intending to return later to fly the Flea back home. He never did.

Some Club members repaired it but no one dared to fly it. For me on this June morning there was a choice: to fly it to England or stay under the German yoke.

I decided to give the little airplane a basic clean up and see what I could find. All was good as far as I could make out, so I refueled the tank. Would this be enough to get to the destination? I surely hope so. I pushed it out of the hanger and turned the engine over a few times. Here goes, contact: Plenty of smoke, backfires and then it ran. What joy! This is the sound of freedom.

I got into the little cockpit and let the engine warm up for a few minutes. Hey, what is this? No rudder bar, no ailerons either, and very few instruments.

Well, here goes nothing. I opened the throttle a little and got rolling. I discovered that the stick was also the rudder control so a little more rpm’s and moving faster now.

Ok, full bore and in a second or two the tail lifted a little and take off happened at the same time.

We are flying in the wrong direction, how to steer this thing? Let us try moving the stick one way slowly. Hey, it turns very nicely. Good now, the other way to get to the correct heading. How easy it did that is a real surprise. A fantastic thing is happening. Here I am flying without ailerons, no rudder pedals, and the flight is really smooth.

I stayed very low to avoid unwanted attention from the German Air Force who send many ME and FW to look for any intruders. At 54 mph I have plenty of time to admire the landscape that I may not see for a long time if ever again.

Approximately 25 minutes later I see the English Channel in front of me. Man, is this crate easy to fly! Ok, time to stop dreaming now and concentrate on getting to a destination somewhere on British soil. The engine runs like a well-oiled clock, so here goes. I turn toward the English coast and at 10 feet above the water and 56 mph head toward my destiny. I think I got a little help from above too.

This little aircraft equipped with only minimal controls is extremely reassuring and I enjoy the flight looking over my shoulders from time to time looking for German fighters.

I dreamed of joining the RAF and fight to free my country, but also to locate the owner of this little aircraft so that I can give it back with my sincere thanks.

After 1.35 hours of enjoyable flight, the cliffs are in front of me and I climb to get over them, easy does it. As soon as I level again a large meadow appears in front at a distance, so here we go. Landing time has arrived. I reduce rpm’s and we sink very gently to 3 meters when I give more rpm’s to get to the edge of the field.

Passing over the fence at low level I cut the engine to idle and let the aircraft sink on its own. It steadies itself. A gentle pull on the control stick and we are rolling.

I turned the engine off and got out, gave it a pat and muttered my thanks for a fantastic job well done. The local constabulary arrived shortly thereafter and took me to an airfield nearby, but not before I had them make contact

with the aircraft's owner, advising him of his machine's arrival in the country.

I did join the RAF, flew a Mosquito MK4, and downed a few ME and FW too.

I eventually met the owner of my freedom machine, had lunch with him and told him of my escape from France in his Flying Flea.

This aircraft gave me a lot of joy on this short flight. I rediscovered the dreaded rudder pedals soon enough, asking myself why there are no fighters using simple controls like this little machine had.

The war finished. I returned home and shortly after built my own Flying Flea and had many years of joy out of it. But, this is another story that I may tell you someday.

This is translated with the editor's permission. The magazine is Le Pou du Ciel edited by Michel Jacquet Mr. Flying Flea. France.

- Provided by **Richard Fraser**

Presentos!

Lack of space prevented us from publishing this picture last month (that sounds so much better than we forgot we had this picture until after the newsletter was finalized).



We'd like to say that our chapter budget for presenter presentos has gone up, but that would be a convenient lie. Here **Dave Vanhoy**, USAF Test Pilot School Technical Director, presents **Mike Machat** with an NF-16 VISTA model in appreciation for his work on many recent

projects. These projects include repairing damage to the NF-104 painting that hangs outside of Scobee Auditorium. It had water spots on it as well as dirt and grime that comes from hanging on the wall for years. While the painting is not a Machat original, **Mike** has restored it to its original glory.

Mike is also in negotiations for another painting in celebration of the USAF TPS 70th anniversary. We can only hope that this project will be funded in spite of the budget buffoonery currently in Washington.

Secret Picture of America's Most Advanced Fighters

I'm not so sure, but **Kent "Cobra" Troxel** tells me that this is a picture of an F-22 and an F-35. He may be technically correct, but I'm not so sure...



Cobra claims that the F-22 is motorized, and, uh...so is the F-35.

New Chapter Video Borescope

Many of our chapter members expressed interest in purchasing a video borescope. We recently purchased an Exttech BR250.



Initial testing shows that this video borescope will be a complement to, not a replacement for our chapter optical borescope. The monitor has a 640x480 resolution, and can be detached, connected to the borescope wirelessly. This means you can put the monitor somewhere you can easily watch it while manipulating the handle to move the camera

around. In the monitor is a micro-SD card that can be used to record still images or videos.

The camera end has a diameter of 9 mm, and has four LEDs next to the camera to light up dark areas. It is mounted on a gooseneck that allows it to be inserted into confined areas. It includes accessories such as a magnet and a hook, presumably for retrieving small objects in inaccessible locations. There is also a small 45 degree mirror that can be attached in front of the camera for off axis viewing.

So how well does it work? A quick, unscripted test (no test plan, no safety plan, no management review, oh my!) showed that it basically has the same advantages and drawbacks of a typical digital camera. As part of its advertising, it is billed for inspection of HVAC systems. It works well at significant distances from the camera if the area is well lit. Still photos are date and time stamped. Looks like I need to reset the date...



However, even with the LEDs around the camera, in dark, confined areas the quality of the picture is degraded. Additionally, the depth of field is limited to focusing at a minimum of 1 to 2 inches. This is the plug over the oil pickup screen on my engine. It looks like something off of one of those deep diving ROVs searching for the Titanic.



The mirror over the camera seems like it would be very simple and effective. However, glare from the surrounding frame and any schmutz on the mirror serve to degrade the picture further. This picture is of the antenna mount above the headliner of Three Sigma. Can you see the BNC connector and the nutplate?



We're waiting to see how well it works through the spark plug hole of a cylinder. Fortunately the picture on the display is slightly better than these still photos.

I had hoped that this device would make inspecting the inside of cylinders easier for me since wearing trifocals makes it difficult to look through the optical borescope. We'll see how its usefulness works out. Feel free to try out your own ideas.

- Russ Erb

Sequestration and You

Normally your newsletter would have an even number of pages, filled with exciting aviation stuff for your enjoyment. However, you haven't sent anything in to be published. Additionally, **Evil Editor Zurg** was furloughed for 20 per cent of the publication cycle and we are not allowed to make up for his absence. Oh, well. Get out your crayons and fill in the next page yourself.

Web Site Update



Just a reminder that the EAA Chapter 1000 Web Site is hosted courtesy of Quantum Networking Solutions, Inc.

You can find out more about Qnet at <http://www.qnet.com> or at 661-538-2028.

Chapter 1000 Calendar

Mar 12: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

Mar 19: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Apr 9: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

Apr 16: EAA Chapter 1000 Monthly Meeting, 6:30 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

Apr 27: Adelanto Fly-In and Open House (52CL), 7:00 a.m. – 3:00 p.m. (760) 963-8290

May 14: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

May 18: Twenty Second Annual Project Police Airport Barbecue, Rosamond Skypark (L00), Rosamond CA. (661) 609-0942

May 21: No Third Tuesday Meeting. Go to Airport Barbecue instead.

Jun 11: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

Jun 18: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Jul 9: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

Jul 16: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Jul 29 – Aug 4: EAA AirVenture. Oshkosh WI.

Aug 13: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

Aug 20: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Sep 17: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

To join Chapter 1000, send your name, address, EAA number, and \$20 dues to: EAA Chapter 1000, Doug Dodson, 4431 Knox Ave, Rosamond CA 93560-6428. Membership in National EAA (\$40, 1-800-843-3612) is required.

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Inputs for the newsletter or any comments can be sent to Russ Erb, 661-256-3806, by e-mail to erbman@pobox.com

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**THE LEADING EDGE
MUROC EAA CHAPTER 1000 NEWSLETTER**

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<http://www.eaa1000.av.org>**

ADDRESS SERVICE REQUESTED

**THIS MONTH'S HIGHLIGHTS:
MONTHLY MEETING 19 MAR @ TPS
DUES DELINQUENTS! SHAME!
POU DU CIEL
NEW VIDEO BORESCOPE**

