



# We Want Your News

*It's a new year full of opportunities and our members, if they are anything like me, need a little motivation to work on their flying projects. This newsletter is there to share your good news, and even your hard-learned lessons, so that we can be reminded why we joined the EAA.*

*So if you have had a first flight, finished your paint scheme, test-fitted the wing, started a new project or even just started*

*working on your project again, let us know by sending us a few pics with suitably detailed comments.*

*We also have a website and would love to host your build blog, or at the very least send us a link to your Facebook or web page so we can follow your progress.*

*So, in short... We Want Your News! We Need Your News! Send us your news! - Gus 'Uncle Sam' Brown*

## Whassup!

**Wednesday 14 January**  
Chapter 322 Meeting  
Dickie Fritz MOTH Hall  
Edenvale

**Sat 17 January**  
Breakfast Fly-in  
Mabalingwe

**Sat 07 February**  
MISASA Best of the Best  
Wings - Wheels - Water  
Showcase  
Kitty Hawk

**Sat 28 February**  
Aero Club Annual Sling,  
Bushbaby & Chopper Fly-in  
Bethlehem

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# HOW I BUILT MY LITTLE AEROPLANE

PART 1 - Roy de Stadler Chapter 973 Krugersdorp

The above is the subtitle to Henri Mignet's book, *Le Sport de L'Air*, published in the early 1930s, on how to build and fly the Pou-Du-Ciel, or Flying Flea, as it was dubbed by the Air League of the British Empire in their translation of the book. Helen of Troy may have launched a 1000 ships, but Mignet's book made homebuilding a reality. On a small budget and with the use of easily available materials it raised a storm with thousands of projects started. After all, Mignet said, 'If you can nail together a packing case you can build an aeroplane!' The authorities in Great Britain and France were caught unawares and were forced most reluctantly to create a category for homebuilt aircraft. Understandably the first aircraft given Permits to Fly were Flying Fleas, namely GB1 and F1 respectively. And so the true homebuilding era started.

In 1935, however, not surprisingly the movement got into trouble as it had mushroomed uncontrollably. There were 11 fatal accidents in France and Britain where the aircraft entered into an uncontrollable dive from which there was no recovery. The Fleas were then grounded while both countries conducted their investigations. Full scale aircraft were tested in wind tunnels and the causes were quickly identified. What had happened was that the vertical separation of the wings was too small and that airflow from the front wing could be directed under the rear wing instead of over it, thus lifting the tail. Furthermore, the incidence of the front wing could be negative, as much as  $-15^{\circ}$ , which would pitch the aircraft forward. Only minor modifications were needed and within 6



months a hundred aircraft were flying again in Great Britain. But the magic was gone and the Flying Flea was labelled as a widow maker, an image that it still struggles to cast off today.



Mignet with his "Bebe", the HM16, that was his favourite. It was minute and only he would fly it, as the short coupling meant that the C of G range was small, making it oversensitive to weight differences between pilots.



I acquired the book as a youngster and immediately fell in love, but I heard nothing but the bad news. I even wrote to the Air League some years later and was advised not to build it. It was only in 2000 that I discovered that the problems had been solved in 1936 and that there had been a revival of interest in recent years. So now I am living my dream and building an updated version of the HM293, a popular one of the many designs Mignet produced over his lifespan.

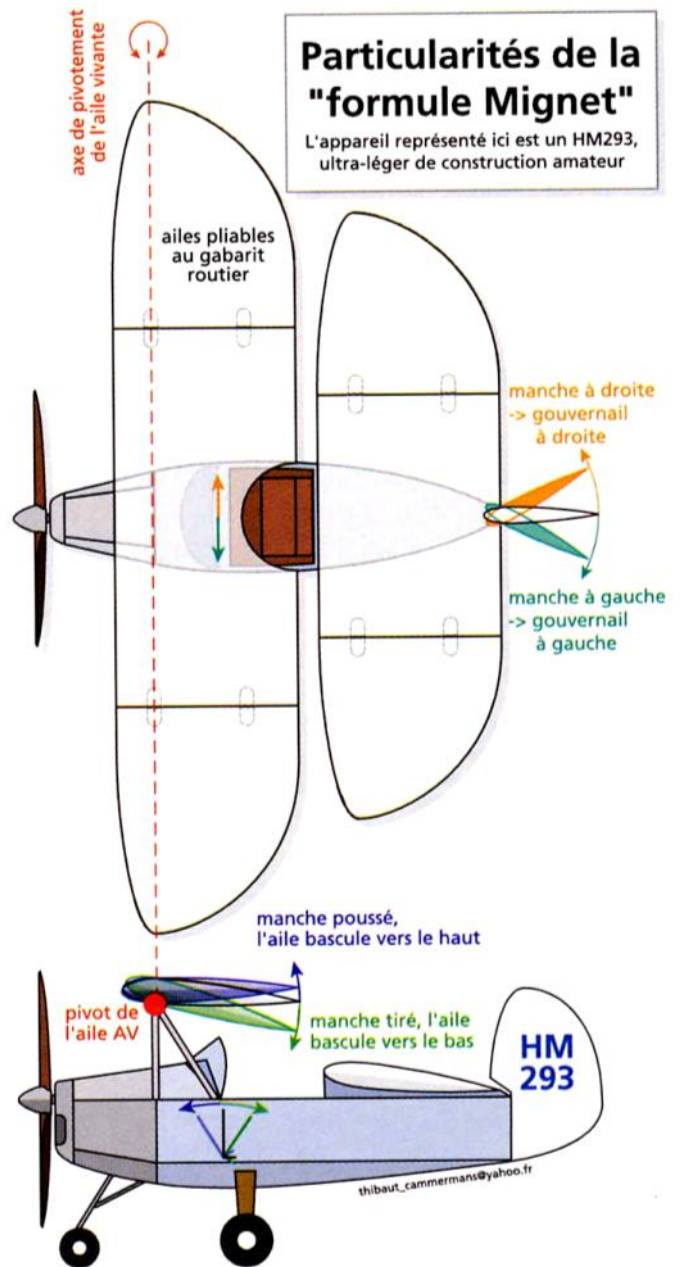
I obtained plans from Fred Byron in Australia, a happy choice as Fred had updated the original plans. He has been a tower of strength to me over the years and has patiently answered my many, many queries, some of which were quite daft! Fred spent his entire working life in the aircraft industry and has built numerous aircraft. So access to this wonderful guy has been a big plus for me.



Roy de Stadler with his baby



Fred Byron's HM293FB



The Flea layout showing the simple aircraft controls. Mignet could not coordinate his hands and feet and, after 27 hours with an instructor in a conventional aircraft, they mutually agreed that he would never achieve a pilot's licence. This spurred him on to design an aircraft which would not require the use of the feet. (to be continued...)





# ***Bearhawk First Flight***



*Is it a bear?  
Is it a hawk?  
Grrr  
It's a Bearhawk!*

Initial Report on Wayne Giles' Bearhawk Patrol ZU-BHP  
Flight Approval Testing - Karl Jensen Chapter 322 Joburg

I have owned and flown my 1955 Cessna 170B for the past 17 years and recently re-engined with a Lycoming O-360 with constant speed prop. The engine/airframe combination is a match made in heaven, giving a scintillating performance.

My 170's performance is rather pedestrian when compared to my friend Wayne Giles' magnificent Bearhawk Patrol which I flew for its 1st flight on 17 December 2014 and have flown it an additional 5 times. Having carefully monitored the build of the plane as my Cessna's happy hangar is close to Wayne's workshop, I was pleased to be assigned the proving flights process required by the SA Civil Aviation Authority as this Bearhawk Patrol is the first of type to fly in South Africa.

Wayne has spent about 2 years building his Bearhawk Patrol, appropriately registered ZU-BHP, and finally it was ready for proving flights with the local CAA's approval. There is healthy home-built aircraft activity in South Africa and, having seen many of the projects in process and completion, I rate

Wayne's Bearhawk Patrol as one of the most meticulous builds I've encountered. The completed aircraft is truly a work of art. The old adage 'if it looks right, it will fly right' is what I found with Wayne's aeroplane.

The engine is a Lycoming IO-360 fitted with a 3-blade MT propeller. As the engine is new, we are observing the Lycoming recommendations for breaking it in correctly. We are unable to do some of the required flight testing such as slow speed handling, stalls and spins without compromising the engine break-in regimen. These tests will follow about 5-8 flight hours ahead, or when the rings have bedded properly and low engine power settings can be used freely. With the three blade prop, the engine is almost as smooth as a turbine.

***'A true rocket ship'***







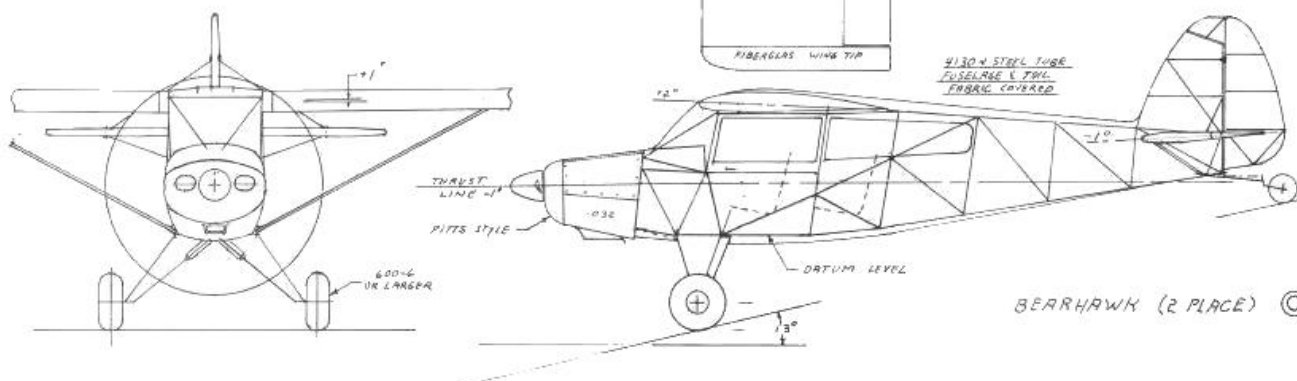
I rate this Bearhawk Patrol as one of the most benign tail-draggers I've experienced. The performance at our home airfield at 5200' amsl at OAT's ranging from 60-85°F at max gross is thrilling – a true rocket ship with solid fighter-like handling qualities. This is intended as a compliment to the designers and also to Wayne for his quality build. From the first flight, the aircraft has flown straight and true with no tweaking of the rigging required. We have not flown at max IAS, but even with 70% power which is all we can achieve at our home base altitude, the indicated airspeed straight and level is into the yellow arc at 148-155 mph giving a TAS of 160-165 mph.

The approval flying required by the CAA is 40 hours for a new non-type certified aircraft (NTCA) in this country. This is a conservative and rather stringent requirement for an aircraft type that has been proven in the USA. We will abide by the regulations and should the testing process for this aircraft proceed as I expect it to, we will approach the authorities to reduce the required minimum flight time for the issue of the South African ATF (Authority to Fly).

## Specifications

Top speed -----165 mph  
 Cruise speed-----140 mph  
 Landing speed-----35 mph  
 Take-off roll-----250 feet  
 Range (55 gal. @35%)---900 miles  
 Empty weight-----950+ lbs  
 Gross weight-----2000 lbs  
 Wing span-----33 feet  
 Wing area-----180 sq. feet  
 Length-----22'8"  
 Height (3-point)-----6'4"  
 Cabin width-----32"

Cabin length-----9'5"





# Mabalingwe Breakfast Fly-in

Clive King has kindly organised a fly-in to the Mabalingwe Game Lodge on Saturday 17 January from 07:30, but preferably not later than 09:30. The restaurant kitchen closes for breakfast at 10:30.

JAN  
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The resort has agreed to waive landing fees. Landings are at the sole discretion of the pilot. The local sales agent, Hennie de Klerk, has kindly offered three motor cars to transport EAA Members from the runway to the restaurant and back. I will be there for my timeshare week, so will also have a vehicle available. Breakfast is a buffet and is usually excellent.

Silly to state the obvious, but all landings towards the mountain, and all take-offs away from the mountain. The runway is part of the road, but will be blocked off as soon as an aircraft circles over head to join.

We had a lot of fun last year, so here's hoping that we'll have a another good turnout.

If you have queries contact Clive King. 082 850 4141

## Cubby Engine Rebuild

It's been a long time coming - Gus Brown Chapter 322 Johannesburg

What started as a quick job to replace the cracked engine case quickly snowballed into a complete engine rebuild with only a handful of the original parts being reused.

After a very busy year of studying and working, Elan Hoffman and I were finally able to put in the effort in these December holidays to complete our VW engine rebuild and fit the new engine to the airframe. We had a very successful first engine start on the 3rd of January. There are still a few things to be completed before it can be signed out and flown, but we hope to get around to that soon.



A full report will be forthcoming when we finally run out of money for fuel!



CONTACT! Is the official newsletter of EAA of SA. This edition was compiled by Gus and edited with love and kisses by Trixie Heron. All material is gratefully received from Chapters, members and non-members alike. Remember that this is your newsletter, so please submit material as it happens to Gus ([contact@eaa.org.za](mailto:contact@eaa.org.za)) or Trixie ([editor@afskies.co.za](mailto:editor@afskies.co.za)). Our grateful thanks to all those who regularly support our newsletter and our EAA organisation.