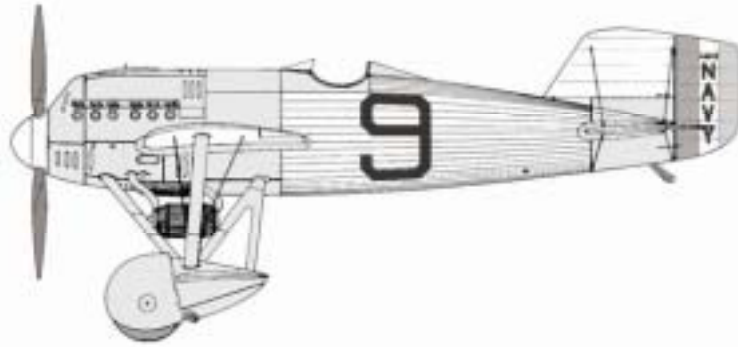


The C. A. Atkins 1/72 Navy-Wright NW-1 - Kit review

Anders Bruun

C. A. Atkins "Navy Wright 'Mystery Ship'", 1/72 kit containing 14 metal parts. The kit does not include decals, but I'm told that decals might become available in the future.



History

The big, brutal-looking "Mystery Ship" (the first plane to carry this nickname?) has always been a favourite of mine, but like so many other interesting and promising designs it was never to fulfil its potential. It was conceived as a test-bed for the new Wright T-2 "Tornado" engine, which ran for the first time in June 1921. The T-2 was a big water-cooled 60 degree V-12 engine with a displacement of 1947 cubic inches (31.9 litres) which developed 525 hp at 1800 rpm. It was designed as a replacement for the WW1 Liberty engine, and even intended to fit the same engine mountings. The T-2 was considered a rather innovative and promising design, so the US Navy (who had apparently never heard the wisdom of never putting a new engine in a new airframe...) ordered two racing planes in order to test it during the 1922 Pulitzer Trophy race, which were held at Selfridge Field, Michigan. A 250 km (155 miles) race at full throttle is of course the best way to test a new engine...

The construction of the racers was ordered from the Design Section of the Navy Bureau of Aeronautics, which was headed by Cdr Jerome C. Hunsaker. The bureau had no previous experience of racing aircraft, so it was natural to look at the state of the art abroad for inspiration. The French Nieuport-Delage, which had broken the world speed record and won the Coupe Deutsche de la Meurthe race in 1921, was an obvious source of inspiration. It was of "sesquiplane" ("one and a half wing") configuration, with a fuselage-mounted main wing and a small wheel axle wing that was attached to a rigid landing gear structure. This structure also served as a mounting point for the diagonal wing bracing struts.

Construction of the two Navy racers started in July 1922, a mere three months before the Pulitzer race. They were built in Long Island City, mainly by Wright personnel, in buildings rented by the Chance Vought Company. The NWs were rather big planes, with a wing span of 30' 6" (9.3 m) and a length of 24' (7.3 m). Apart from the

sesquiplane layout they were of relatively conventional construction. The fuselage was made from wire-braced steel tubing and, apart from the cowling and the tail cone, fabric-covered. The wings were built of wood and covered with plywood, except for the part of the main wing aft of the rear spar, which was fabric-covered. The tail surfaces were made of steel tubing and fabric-covered. The main wheels, which were completely enclosed by fairings, had an unusual suspension arrangement. The wheels were fitted at the front of triangular links that pivoted around a transverse axis aft of and at the top of the wheels. Shock absorbing was provided by rubber bungee ropes at the bottom of the links, low down aft of the wheels. The engine drove a 9 feet (2.74 m) two-blade wooden propeller and was cooled by two Lamblin "lobster pot" radiators that were mounted between the landing gear legs. For the race the compression of the engine was raised, so that it delivered 600 hp at 2000 rpm.

2nd Lt. Lawson H. "Sandy" Sanderson performed the first test flight of the first plane (NW-1, A-6543, race number 9) on October 11th, only three days before the race. The test flight, which reached an unofficial 209 mph (336 km/h) did not show any vices and Sanderson was completely satisfied. On race day Sanderson flew in the same heat as the four Curtiss planes (two R-8s and two CR-2s) that eventually took the four first places. Sanderson flew a good tight race, holding fifth place and averaging 186 mph (299 km/h) over the first three of the five laps. However, the oil temperatures were rising alarmingly. The one and only test flight had been performed without the engine cowling, which was still not finished three days before the race, so the inadequate oil cooling had not been noticed. Sanderson was determined to finish the race, so he hung his handkerchief over the oil temperature gauge and pressed on. It did of course not work - the engine seized solid over Lake St. Clair and Sanderson had to ditch the plane. After skipping several times over the water it came to rest on its back in four feet of water. Sanderson had to literally dig his way out of the mud to reach the surface. He was unhurt, but the plane was never repaired - another victim of the rushed construction programs, inadequate testing and reckless attitude that destroyed so many racing planes, and killed so many pilots, during the 20s and 30s.

The sister plane, NW-2 (A-6544), was not finished in time for the Pulitzer. It was completed in January 1923 and differed from the NW-1 mainly in the engine cowling and landing gear fairings. During one week it made a series of test flights, but after those it was converted to a biplane floatplane for the 1923 Schneider Trophy. During a test before the race, gambling on running at a virtually untested 2250 rpm in order to have a chance against the superior Curtiss CR-3s, the engine blew up and disintegrated completely. The pilot, Lt "Jake" Gorton,

pants, struts etc.) should be satin finished light grey FS 16473 ("Aircraft Gray") and fabric and plywood parts in "silver" aluminium dope. The exception is the spinner, which looks lighter than the cowling - it was probably unpainted aluminium. The Lamblin radiators were made of brass. It is difficult to see the propeller in most photos, but it can probably be assumed to have been natural wood. The seat was natural metal and otherwise the interior would probably have been dominated by grey tubing, silver fabric and wooden stringers. The rudder was painted in blue-white-red national colours (blue to the front).

All the markings were black: Race number 9 on the fuselage sides, the little airplane number A-6543 at the top of the white field of the rudder and the letters NAVY in a vertical row on the white field of the rudder.

Conclusion

This is a great little kit of an unusual plane that I'm sure will get attention from your modelling friends. The shape is very good, and most of the little parts that need to be added are easily made. Casting standard is generally very good, but there was some pitting on my example, especially on the main wing undersurfaces. The kit includes a simple instruction sheet and a copy of the

simplified Paul Matt drawings printed in "The Speed Seekers".

References

The Paul Matt drawings and either of the two Thomas Foxworth references mentioned below (they are quite similar) are indispensable if you want to make the best of the kit.

- € **Thomas G. Foxworth "The Mystery Racers, Part I: The Navy-Wright NW-1, NW-2"** (Historical Aviation Album, Volume IV, 1967)
- € **Thomas G. Foxworth "The Speed Seekers"** (Haynes, 1975 and 1989)
- € Drawings by **Paul R. Matt** (1967), published in "**Historical Aviation Album, Volume IV**" and in "**The Best of Paul Matt, Volume 2**" (Aviation Heritage, 1991). A simplified version was printed in "**The Speed Seekers**".

Photos of the NW-1 can be found here and there in the air racing literature, for example in the following:

- € **Reed Kinert: "Racing Planes & Air Races, Volume I"** (Aero Publishers, 1969)
- € **Birch Matthews "Race with the Wind"** (MBI, 2001)

A big thanks to "Tommy" Atkins for the review kit!

C. A. Atkins metal kits

It's been a while since I last gave an update on Tommy Atkins' kits. The following 1/72 white metal racer kits are available:

€	Curtiss CR-1	£10
€	Curtiss CR-2	£10
€	Curtiss CR-3	£10
€	Short Crusader	£10
€	Gloster IV	£10
€	Pegna PC7	£10
€	Navy Wright NW-1	£11

Postage and packing: For UK add £1 per order, for Europe add 10% of the cost and for the rest of the world add 20%. Payment should be made by cheque to C. A. Atkins, no credit cards. The kits do not include decals, but I'm told that decals for a couple of them might become available in the future. Future plans include Frank Hawks' "Time Flies", the three different Curtiss-Cox "Texas Wildcat"/"Cactus Kitten" versions and the Gloster VI. The address is **C. A. Atkins, 17 Ashbourne Avenue, Bridlington YO16 4PE, UK.**