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# 12 American Fighter Planes That Never Were

They flew, but never fought.



By Eric Tegler Sep 14, 2016 761

What makes a successful fighter aircraft? It's not an easy question to answer. The U.S. military started grappling with it during WWI, developing a patchwork process for evaluating fighters by the 1930s. At the beginning of WWII, the pressure just to get something to the front lines led to dozens of contracts for just about any aircraft that seemed likely to get out the door and into the air.

The United States Armed Forces have gotten choosier and more scientific since then, but there are still countless variables. Things like basic performance or potential combat effectiveness are important no doubt, but you only need glance at the F-35 to see how technology, industry considerations, price, and politics can weigh as heavily.

Here are a dozen airplanes that might have become fighters in the Army Air Corps, Air Force or Navy but for one reason or another didn't quite fly.

## Bell XP-59 Airacomet, 1942

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America's first jet fighter plane, the Bell XP-59 Airacomet, was just a bit ahead of its time. Development began in 1941 after American generals saw British inventor Frank Whittle's jet engine during testing in England. Bell Aircraft put two General Electric 1-A turbojets—based on Whittle's design—into a conventional straight-wing monoplane design, one much like propeller-driven fighters of the time.

The Airacomet first flew in October 1942. Problems with its engines hindered its development early on, but by 1943 the XP-59A could go 409 mph at 35,000 feet. That put it nearly on par with the best American propeller-driven fighters, but its jet engine was unreliable. The craft also accelerated slowly and just wasn't a good gun platform.

Ultimately, it was judged unsuitable for combat. Nine X/Y-59 prototypes and 50 production versions were built and used very briefly for jet transition training, but all were out of use by 1945.

## Ryan XF2R-1 Dark Shark, 1946



A result of the Navy's continuing interest in jets, the Ryan XF2R-1 Dark Shark was designed to improve over the Bell XP-59 in one key way: Its acceleration would be high enough that the plane could take off from an aircraft carrier. The initial solution was a "composite fighter," a plane that combined a turboprop alongside a turbojet. The Ryan XF2R-1 in particular paired a 1700 horsepower prop with the same GE turbojet used in the XP-59.

Based on the earlier [Ryan XFR-1 Fireball](#)—which combined the GE jet with a piston engine—the Dark Shark could fly on either its jet or its turboprop alone. With both alight, it could go over 500 mph. The XF2R-1 flew in November 1946, as

the first Navy turboprop. But with the War over, the XF2R-1 was a victim of circumstance and the program was dropped after just one prototype.

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## Lockheed XF-90, 1949



Looking ahead as WWII drew to a close, the Army Air Corps issued a request for a long-range advanced fighter that would be able to escort bombers. Lockheed came up with a design based on its [P-80 Shooting Star](#), but instead of a single engine and straight wing, the XF-90 featured two Westinghouse J34 turbojets— 6,200 lbs total thrust—and 35-degree swept wings. Two prototypes were built, the first flying in June 1949.

The XF-90 proved fairly maneuverable but was underpowered and ultimately lost out to a competing design—the [McDonnell XF-88](#)—which itself led to the F-101 Voodoo. The good-looking XF-90 still holds the distinction of being the first USAF jet with an afterburner and though it wasn't for service, it was regularly featured in a 1950s DC Comics series called "Blackhawks."

## Convair XF2Y Sea Dart, 1953





Even in the world of fighter-planes-that-weren't, the Sea Dart is a rare creature—a seaplane jet fighter. Japanese seaplane fighters had shown tactical advantages in WWII and with carrier jets of the time unable to attain supersonic speed, a seaplane was seen as an alternative for the Navy's supersonic interceptor program in 1948.

The Sea Dart's radical delta-wing design incorporated a pair of turbojets with a watertight fuselage and twin retractable skis for takeoff and landing. The first Sea Dart flew in April 1953 and five were built.

While later prototypes used a more powerful single engine and single ski, the Sea Dart remained underpowered and experienced severe vibration problems on the water. One *did* break the sound barrier in a shallow dive however, making it the only supersonic seaplane ever built. A crash during a press demonstration in 1954 and improving carrier fighters ultimately doomed the troubled Sea Dart, which flew its final flight in 1957.

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## Convair XFY-1 Pogo, 1954





Ever since the advent of lightweight, remarkably powerful turboprop powerplants, engineers and officers alike have been tantalized by the prospect of a fighter that could take off vertically. This eventually came to pass with the Harrier and the F-35B, but Convair wanted to explore the concept and proposed a Vertical Takeoff (VTO) fighter to the Navy as early as 1951.

A competing VTO design from Lockheed took off conventionally and then hovered, but Convair's stubby little Pogo made all of its test flights with vertical takeoffs. The first test in August 1954 saw it lift off from its tail, hover at 40 feet, gently descend to the ground, and rise again to 150 feet before landing for real.

In November it made the world's first vertical takeoff to be followed by a transition to conventional flight. Then, after zooming low over the runway, it pulled sharply upward, stopping in mid-air before settling tail-first onto the runway.

Just one was built and after evaluation, the Navy scrapped the plan. But the Pogo's legacy lives in thanks to its requirement of a zero-altitude ejection seat, the development of which has absolutely benefited future pilots of other, less quirky fighter aircraft.

## North American YF-107A, 1956

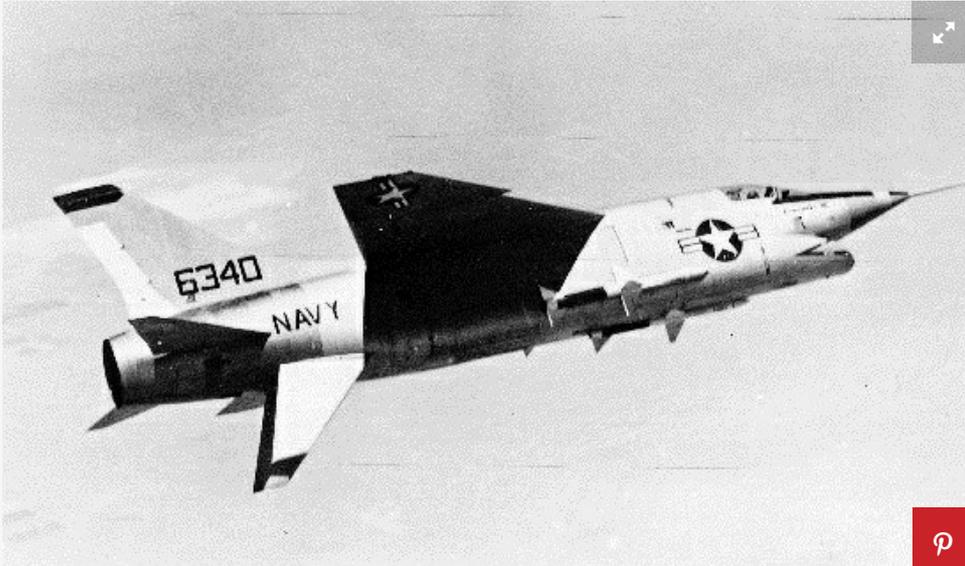
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The Air Force's need for a big, nuclear-capable fighter/bomber in the mid-1950s led North American to use its successful [F-100 Super Sabre](#) design as a jumping off point for the new YF-107A. The craft would need a big radar antenna placed in the nose where the F-100 had its intake, so the YF-107's designers placed the intake above and behind the cockpit, giving the airplane its distinctive look and earning it the nickname "man eater."

With features including a single-piece all-moving rudder and spoilers instead of ailerons, the YF-107 was both innovative and Mach 2-capable, first flying in September 1956. Three were built but they had stiff competition from [Republic's](#)

## Vought XF8U-3 Crusader III, 1958



Chance Vought's successful [F-8 Crusader fighter/interceptor](#) provided the basis for the XF8U-3. While this larger Crusader III looked like the F-8 it was based on, it was very much a new airplane with a more powerful Pratt & Whitney J75 afterburning engine to push it to Mach 2.39, or 1,819 mph. To maintain stability at that speed, it incorporated large ventral fins under the tail which rotated to a horizontal position for landing.

The Crusader III first flew in June 1958, going up against the iconic [F-4 Phantom](#) in the Navy's Mach 2+ fleet interceptor competition. The Phantom was ultimately chosen because its two-man crew could better handle the workload of the new Sparrow missiles as well as ground attack missions. All this despite the fact that Super Crusader was faster and more maneuverable.

Two of the five XF8U-3's built were transferred to NASA and flown from NAS Patuxent River where their pilots routinely jumped Navy Phantoms and beat them in mock dogfights until complaints from the Navy put an end to the shenanigans.

## Northrop YA-9, 1972





The YA-9 was Northrop's response to the Air Force's late 1960s A-X competition, which called for a simple, rugged, low-cost close-air-support jet designed around a 30mm cannon. Its main competition was a plane you may have heard of: the [Fairchild A-10](#).

The A-9 shared many characteristics with the A-10 including a titanium bathtub cockpit around the pilot, triple redundant systems, a straight wing, and a relatively low top speed of 449 mph. Its engines resided below the wing rather than above—as they do on the A10—and its 30mm cannon lived under its belly.

The YA-9 first flew in May 1972, and though the USAF said the A-9 fully met the A-X requirements, it chose the A-10 partly thanks to the latter's proven TF34 engines and likely because Fairchild had no other pending work to ensure its survival. Considering [the A-10 is still in wide use today](#), you might say it was a good choice.

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## Northrop F-20 Tigershark, 1982



Northrop's F-20 was a variation of its widely-used [F-5E Tiger II fighter](#). Work on the F-20 began in 1975, inspired by the Pentagon's FX program which sought a

light fighter that would be competitive with the latest Soviet aircraft but without the sensitive technologies used in the USAF's F-15 and F-16. That way, the F-20 would be readily exportable to friendly foreign nations without running the risk of cutting-edge technology falling into Soviet hands.

The F-20 fit the bill, improving on the F-5 with a redesigned wing, tail, and a single GE F404 engine like that used in the F-18. The extra thrust, combined with composite materials, fly-by-wire flight control, and modern avionics, added up to a capable fighter/attack aircraft with a much lower price tag than the F-15 or F-16. The Tigershark first flew in August 1982 and though three were built, changing geopolitics, State Department and Air Force foot-dragging, and competition from the F-16 ultimately precluded sales, killing the otherwise promising aircraft in 1986.

## General Dynamics F-16XL, 1982



The F-16XL's heritage is evident based on its name alone, but why add a big delta wing to [the Fighting Falcon](#)? The "cranked delta" wing that General Dynamics designers added gave the F-16 more lift, more fuel, and better stability at high speed and low altitude. These were desirable characteristics in the Air Force's Enhanced Tactical Fighter program, which pitted the XL against the [F-15E Strike Eagle](#) in a competition to replace the [F-111](#) in the deep interdiction role.

The F-16XL sprang from an internal General Dynamics program started in 1977 and first flew in July 1982. It handled well at high speed and low altitude and had more range than the Falcon. Still, the USAF chose the F-15E which could carry more payload, had redundant twin engines, and a two man crew.

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