

# DESERT SNIPERS

Marine Corps Air Station Yuma, Arizona is a center of excellence for combat aviation within the service. It is therefore the ideal home for the Marine adversaries of VMFT-401 — the ‘Snipers’.

report: **Johan Franken** and **Frank van der Avoort**



**L**ARGE RUSSIAN FLAGS and propagand posters with Cyrillic script leave you clear that this is no ordinary squadron. The red stars on the aircraft are mainly symbolic — it’s about being a generic enemy. The pilots, meanwhile, are well-versed in knowing how to play the bad guys. Marine Fighter Training Squadron 401 (VMFT) 401 is where you’ll find some of the most experienced fighter pilots in the US Marine Corps. Indeed, even the deputy commandant for Marine Aviation keeps his hand in here.

Each day, the ‘Snipers’ play out scenarios against the ‘bogeys’ provided either by visiting units or the resident F-35Bs and MCAS Miramar, California-based F/A-18s. As with the US Navy adversaries, ‘401’ is a reserve squadron, falling under the command of the 4th Marine Aircraft Wing and Marine Aircraft Group 41.

VMFT-401 was activated on March 18, 1986 at Yuma, Arizona as it laid the logistical foundation for the arrival of 13 Israeli-built F-21A Kfirs. On June 25, 1987 the initial five aircraft, flown by VMFT-401 pilots, arrived at Yuma. Four days later the ‘Snipers’ flew their first published flight schedule and commenced local operations. Just two years after that, the squadron transitioned to the F-5E Tiger II and continued the adversary role with this agile little fighter.

Marine adversary pilot Maj Bapple told the *Yearbook*: ‘We all have generally one or two ship-based tours in our fleet aircraft and all of us are instructor pilots and fairly veteran when we come here. [That] is good — it keeps the ready room a little older, which feels strange at first. It also allows us to spend more time doing our missions and less time spent training our own individual pilots.’

Most pilots at ‘401’ proudly wear their TOPGUN or its equivalent Marine Division Tactics Course (MDTC) patch on their



## ADVERSARY ORIGINS

The US Navy Fighter Weapons School — TOPGUN — initiated the formal use of dissimilar aircraft for training in 1968. Initially using A-4 Skyhawks to replicate enemy MiG-17s, the success of DACT led to adversary squadrons at each ‘master’ jet base. The US Air Force followed suit with their first aggressor squadrons at Nellis Air Force Base, Nevada equipped with the readily available T-38 Talon.

The US Navy steadily introduced stripped-down F-16Ns and early-model F/A-18As, as well as briefly operating F-21 Kfirs. Today, the Navy and Marine adversary units are all reservists, bar the F-16A/Bs and Hornets at the Naval Aviation Warfighting Development Center (NAWDC). Maj Hank comments: ‘We work a lot with both the aggressor squadrons of the USAF and the adversary squadrons of the Navy, but the Marine Corps is going away from the Navy tactics and we are aligning ourselves very much with the Air Force. The Navy tactics are so dependent on the Super Hornet and we are never going to fly those. The USAF has experience in fifth-generation aircraft like the F-22 and understand it very well, whereas the Navy does not so much at this point.’

shoulders. In addition to former F/A-18 pilots, the squadron tries to keep one former AV-8B instructor pilot on its books, and currently there is an ex-F-15 exchange pilot in the squadron. Maj Hank is a new arrival here. ‘These guys are different than the normal squadrons where you usually find only one or two ‘ninjas’ [who] are super-smart in fighting the enemy. That’s something different here in this squadron: we are all already at the same high level!’

## Tiger stripes

Today, the ‘Snipers’ have 12 refurbished ex-Swiss F-5Ns plus one two-seater, and 10 full-time pilots together with a further 10 reservists. In addition to the pilots, a small team of support staff is concerned largely with the intelligence work, keeping track of what potential adversaries are up to and feeding that intel back to the pilots so they can replicate the latest threats.

As with the Navy, the F-5s here are maintained by dedicated and proud

**A VMFAT-401 ‘Snipers’ F-5N down on the desert floor, on the hunt for some action.**  
Joe Copalman



civilian contractors who provide an excellent service for the exotically-camouflaged and red-starred F-5Ns. Maj Bapple notes: 'Our small organization makes us very nimble and responsive generally, and combined with the simplicity of our aircraft and the veteran nature of our maintainers it allows us a lot [of] ability to support the squadrons... [We] can do a lot more than the normal F/A-18 squadrons.'

'The ergonomics of the cockpit are not as convenient compared to the F/A-18,' explains Hank. 'Switches are located everywhere.' He adds: 'I think for what it is — a replication of a former Soviet aircraft — it's pretty accurate. I have been in a real MiG-21 and MiG-29 and their pilot task loading is similar to that of the F-5.'

As a former F/A-18 instructor pilot with around 1,000 hours on type, the move across to the diminutive F-5 was a relative easy affair for Hank. 'I checked in with the 'Snipers' on a Thursday. On the Friday I did all my ground school, so I read all the

books and learned all procedures and studied the cockpit layout for three or four hours. Then on Monday I had my first flight in the F-5. I had my first solo only after three instructor flights. The jet is very simple and there are not a lot of systems like in the F/A-18. Today was actually my first flight using the modest radar of the F-5, which is one of the last steps before one can master the whole aircraft.'

### The advantage of DACT

On a day-to-day basis, pilots in fleet squadrons regularly work 'in-house' for air-to-air training. Dissimilar air combat training (DACT) against other fleet types is often predictable — that is where the 'Snipers' come in, with the benefit of tactics that replicate those of the enemy. It makes for a far more challenging and rewarding fight. The goal here is not to beat the Blue Air pilots, but to make them better.

'We can replicate anything from a MiG-21 to a Su-24 or a Su-30,' says Maj Hank. 'If the Su-30 is what you are

replicating then you have a certain loadout of weapons, radar, optical systems and helmet-mounted sight that you can use. Of course we do not actually have this in our simple F-5. But, being a specialist in this case we simply *know* at what point we would have had a valid kill shot with the real Su-30.'

Traditionally, Red Air adversaries are guided by a complex network of ground radars. The ground control intercept (GCI)



Jamie Hunter



controller oversees the fight and literally guides the Red force into position, often calling the missile shots. 'Depending on the threat that we are replicating, we depend on our GCI,' says Hank. 'Our GCI is known as 'Gremlin' and this guy is one of the best in the US Marine Corps. We spend a lot of time with him while preparing our missions. We can do a fine replication job with the F-5, and that is largely thanks to our superb controller.'

'There are a lot of times when our pilots get [into the fight] unobserved, which is pretty impressive because they are going up against four F-35s or four Harriers. We might lose two or three of our buddies, but we are fighting with a different mindset. We can accept the losses if it stops the Blue Air getting their bombs on target.'

Expanding on the increasing workload against the new F-35s, Bapple explains: 'They have different tactics over a Hornet, and we are doing our best to make them better. Our first fight with them was only last year and since then we have been flying with them more regularly.'

'We do our best with our F-5s to provide any sort of training for any squadron that calls. It can be a light air defense squadron from Fort Bragg or it can be the US Army Stinger [surface-to-air missile] battalion.'



As well as the fighters, we do a lot of training with helicopters. Whoever calls, we serve them. But generally our main customers are Hornets, Harriers and the new F-35s. Bapple and his fellow pilots mainly operate from Yuma, but they often go on the road to take their services to the squadrons in the continental United States.

### Missions, drills and WTI

Depending on the training needs of the squadron, VMFT-401 can offer particular missions and drills. A drill is a specific and often small-scale training procedure.

The missions are more general tasks with much more freedom of action. 'For a mission we can pretend to be country X and defend this piece of terrain, or pretend to be country Y and we are attacking this piece of airspace with our aircraft replicating anything from Su-30s all the way down to a MiG-21,' explains Bapple. 'This mission style is great for us because then we can replicate with the full [box of tricks].'

'We have three or four different levels of difficulty. An F-35 instructor pilot will simply tell me, 'Do your best as a level five threat. Here's the vul [vulnerability] time

Top: A 'Snipers' F-5N tucks away the gear as it gets airborne from MCAS Yuma. Johan Franken/Frank van der Avoort

Above: The 'Snipers' regularly go on the road to fulfil training requirements. On this occasion it's Miramar to support VMFAT-101 'Sharpshooters'. Jamie Hunter

Right: A fine topside view of the squadron's 'Franken-Tiger' — a hybrid with the cockpit of an F-5F and the rest of the airframe coming from a former Swiss Air Force F-5E.

Joe Copalman

Below: An immaculate F-5N, with canopy cranked, heads back to the sanctuary of the sun shelter.

Johan Franken/  
Frank van der Avoort

Inset: 'Snipers' boss Lt Col William 'Wild Bill' Sheridan IV.

Johan Franken/  
Frank van der Avoort

and this is where the fight starts and ends". The debriefing is always a lot more complex, with lots of lessons to be learned.

The drills relate to specific areas where a squadron needs training against a set threat. 'Unlike the missions, a lot of what we do are simple drills', says Bapple. 'Practising particular intercept mechanics and providing a platform against which they can create a 'habit pattern' is something that we do frequently. These drills are not much fun for us but they are exactly what a squadron with very junior pilots needs. Whatever they ask for we are happy to give — ultimately, at the debrief their pilots should be that little bit better for killing us. If they didn't kill us, we will help them figure out why.'

Twice a year these smaller missions morph into the huge Weapons and Tactics Instructor (WTI) course conducted by Marine Aviation Weapons and Tactics Squadron One (MAWTS-1) at Yuma. During a WTI, most of the visiting units get to fight the 'Snipers'; indeed, many of the scenarios build up to a large force exercise with up to 40 players. 'We fly our wings

off during WTI', jokes Bapple. 'The Blue Air guys, for example, fly a six-hour defensive counter-air [DCA] mission and we are, of course, [heavily involved].'



Whereas WTI is the high-end training, the 'Snipers' offer a range of training services, including no-less-important simple profiles to test the target acquisition and tracking capabilities of radars, missiles, and aircraft. Some of these missions are outsourced to contractor air services such as the Airborne Tactical Advantage Company (ATAC) or Draken International flying the Hawker Hunter, Kfir, and A-4 Skyhawk, for example. These are similarly flown by experienced former military aviators, but are on tap as and when extra 'iron' is needed for specific tasks or exercises.

The increasing number of commercial Red Air contractors is something Maj Bapple recognizes as a positive step. 'It's great that the need for Red Air is recognized within the Marine Corps', he says. 'We cannot meet all the requests at VMFT-401 and therefore somebody needs to help us in providing the adversary role.' 🇺🇸

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**MAJ 'HANK', VMFT-401**

