

**USAF pre-strike reconnaissance photo showing dozens of North Vietnamese trucks hidden in a plantation in Kratie province, July 1974.**

of extra airframes and spare parts on hand.

With this focus on the T-28, the AVNK sortie rate began to pick up. Between March and October, a total of 2,016 T-28 strikes were recorded. MiG-17s, which were being refitted with the new machine-gun system, registered another 360 more. The CM-170s came in third with just 108.

While these numbers were impressive when compared to the AVRK years of inactivity, they were hardly sufficient to cope with the threat at hand. For the time, however, allied air power was more than adequate, which took much of the urgency out of the need to make the AVNK a self-sufficient organisation. Besides, like Sihanouk, Lon Nol viewed indigenous air power as a potential threat and took pains to keep it from growing too fast.

## Starting From Scratch

Ten months into the war, the AVNK received a major setback. On the night of January 21, 1971, 97 North Vietnamese commandos from the 367th *Dac Cong* Group approached the perimeter of Pochentong Air Base. Dividing into six detachments, they scaled the barbed wire fence and overwhelmed the base's security battalion. Running across the base, they unleashed a fury of automatic weapons fire and rocket-propelled grenades. One group of commandos climbed on top of the commercial terminal's international restaurant and fired a rocket into the napalm supply near the VNAF apron.

When the smoke cleared the next morning, 39 people lay dead and another 170 were wounded. In addition, the vast majority of the AVNK had been destroyed. This included all of its MiGs and T-28s, the UH-1Hs, a trio of VNAF O-1s, and even a VIP transport that had just been presented to Lon Nol by the South Vietnamese government. So dramatic was the Pochentong attack that it was listed as a contributing factor to the stroke that was to partially disable Lon Nol.

Dazed by the attack, Pochentong was closed for nearly a week as wreckage was removed and emergency facilities established. By the time it re-opened, the US had activated a Military Equipment Delivery Team - Cambodia (MEDTC) to co-ordinate support for the Cambodian armed forces. Because of US Congressional legislation, MEDTC personnel were forbidden from directly advising the Cambodian military on Cambodian soil. Instead, MEDTC was mandated with determining Cambodia's defence needs and distributing all hardware coming under the \$185 million in US military aid budgeted for Fiscal Year 1971.

With new airframes flowing through MEDTC, the AVNK was slowly reborn. With this rebirth came a change of names, with the old French-influenced AVNK giving way on June 8 to the more Americanised title of Khmer Air Force (KAF). So Satto, by now promoted to full colonel, remained its commander.

Among the first new planes to augment the KAF was the AC-47 gunship. Late that spring, two experienced C-47 crews had been sent to Udorn RTAFB for gunship instruction by USAF advisors. Unlike the Lao and VNAF versions of the AC-47, which featured miniguns, the KAF variant had a single and double pair of 0.50in machine-guns, chosen for ease of maintenance. Also unlike their Lao and South Vietnamese counterparts, which commonly used the US Air Force's *Spooky* callsign, the Cambodians dubbed their AC-47 the *Lougaru*, a twist on the French word for 'werewolf'. In mid-June, the two AC-47 crews, together with two airframes, returned to Cambodia.

Stationed at Pochentong, they were used exclusively for night-time air base surveillance and defence in order to prevent a recurrence of the January commando attack.

For its strike component, the KAF had inherited very little after the January explosions. If any silver lining could be found, however, it was that maintenance problems would be simplified now that all the MiG-17s and CM-170s were gone. (One CM-170 had escaped the January attack intact, but was in unflyable condition.)

Free to focus its attention on the T-28D, MEDTC delivered 16 by year's end. Similar simplification was seen in the KAF's reconnaissance section, with two dozen O-1Ds turned over by December, while the transport fleet had grown to 19 C-47s by the end of the same period. Sixteen DHC U-1A Otters handled liaison tasks.

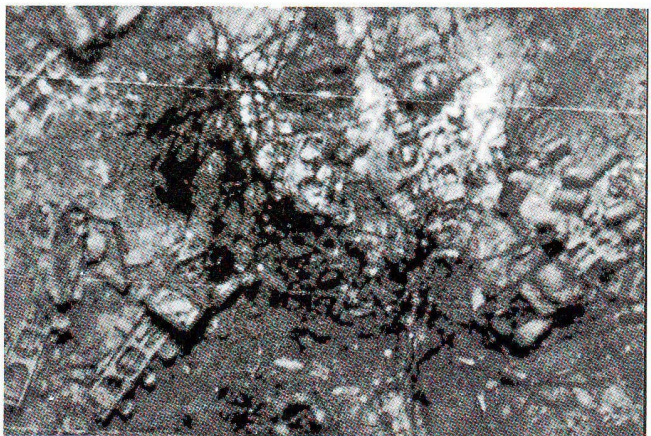
For its rotary wing, the KAF still had four Alouette IIs and a single Alouette III which had somehow escaped the January attack. However, all were inoperable due to lack of spares. Accordingly, the four Alouette IIs were lifted by fixed-wing aircraft to Hong Kong to await French parts. The Alouette III, for the time being, sat idle in the grass at Pochentong. The French parts did not arrive until January 1972. That same month, the KAF's single Alouette III was lifted to Hong Kong for an overhaul. However, there is no record that any of these aircraft ever returned to Cambodia.

By that time, the contingent of Khmer pilots in South Vietnam had finished helicopter training. Returning to Cambodia, MEDTC provided them with a new fleet of UH-1Hs. A total of eight airframes were turned over by December. As these Cambodian *Huey* crews were still inexperienced, the VNAF continued to provide additional UH-1H transport and UH-1G gunship support to Lon Nol's armed forces. During the *Chenla II* operation in November, for example, over two dozen VNAF UH-1Hs and eight gunships flew in direct support of Cambodian ground units. With the earlier Pochentong attack in mind, these VNAF choppers returned nightly to South Vietnam.

Helicopters were not the only South Vietnamese aircraft flying in Cambodia. VNAF AC-47 and Fairchild AC-119 Boxcar gunships flew nightly support for Cambodian outposts under attack. During daylight hours, VNAF fighters and spotters patrolled eastern Cambodian airspace, sometimes with KAF personnel acting as co-pilots. DASC *Zulu*, headed by a VNAF colonel, controlled these missions.

By the close of 1971, a growing problem for KAF was pilot fatigue. To correct this situation, Colonel So Satto lobbied for greater foreign support. Specifically, he wanted to accept a Taiwanese offer to provide instructors for the Air Academy at Battambang.

As much as So Satto wanted this help from Taipei, Lt Colonel Norodom Vatvani, the academy commander, opposed it. For Lon Nol, this was a welcome disagreement, as he was looking for an excuse to remove all officers of royal lineage from key positions. Because of this, Vatvani, who hailed from the extended royal family, was yanked from Battambang and given an inconsequential desk job as Director of Future Plans. With Vatvani gone, a contingent of Taiwanese instructor pilots was at Battambang by year's end. Initially, they were more of a hindrance than a help. For one thing, they had poor English skills. Secondly, they were inexperienced in the Cessna T-41 Mescalero trainer, nine of which had been delivered to the academy by MEDTC. As of January 1972, there were still four Horizons at the Air Academy, but all were unflyable. By February 1972, however, these problems had been sorted out and the Chinese took on 15 students of their own.



**USAF post-strike reconnaissance photo showing some of the 125 trucks destroyed during the KAF T-28 bombing mission in Kratie, July 1974.**



Right: Insignia worn by KAF AU-24A crews.

In addition to Taiwanese assistance, the opening of 1972 brought with it a short chapter of Australian aid for the KAF. In January, the first group of 12 KAF trainees headed for Canberra. Half received basic instruction, while the other half were upgraded to the C-47. A total of 18 Cambodians were to be trained. During the same month, six silver Australian C-47s were turned over at Pochentong. These were destined to go to Battambang for training purposes, thus enabling six camouflaged C-47s, delivered earlier by the US and previously used at the academy, to be freed for combat support.

### Growing Pains

Early 1972 saw rapid growth in the KAF inventory. In January, seven more T-28Ds arrived via MEDTC, with three more expected by June. A third AC-47 was added by January, with three more programmed for the next month. A ninth UH-1H was also expected.

In addition to getting more aircraft, KAF was looking to make more efficient use of its existing strike inventory by employing Forward Air Controllers (FACs). In March, the US Air Force agreed to give six Khmer FACs a two-week course in South Vietnam. By the time this contingent returned in April, however, it was discovered that KAF had no competent O-1D instructor pilots who could pass on the training.

Inadequate training, in fact, seemed to be the KAF's biggest downfall. When 30 new pilots finished basic training in April, for example, they had received only 60 hours in the T-41. With such a short amount of time in the air, it came as no surprise that three T-41s were lost in fatal training accidents during July.

When students were not crashing aircraft, combat was taking its toll. In March, a Khmer Rouge mortar attack destroyed three U-1As at Pochentong. In August, a SA-7 shoulder-fired rocket downed a UH-1H, killing all aboard. It was fired by North Vietnamese forces, the Khmer Rouge were never equipped with this weapon. Worse, a total of 14 T-28s were lost over the previous 12 months. Eight of the losses were due to pilot error, and another three for mechanical reasons. Only three were lost to enemy fire. With its fighter pilots thus demoralised, the KAF sortie rate dropped below that of the previous year, when more missions were flown with less aircraft.

### Glimmers of Hope

Showing its resilience, KAF soon showed signs of rebounding. This was largely due to a concerted attempt by So Satto and the MEDTC to motivate the fighter contingent. Their effort soon paid off. By October, there was a 60% rise in the T-28 sortie rate; November saw the arrival of another five T-28Ds and a 12% sortie increase over the previous month. Equally encouraging, O-1D FAC sorties were up by nearly 25%. Flying daily out of Battambang, Ream, Kompong Cham, and sometimes Kompong Chhnang, the FACs mainly gave real-time intelligence to army ground commanders, adjusted artillery, and sometimes put in tactical air strikes.

The training sector, too, began to show slow improvement. Much of this came from external assistance.

In June, for example, Taiwan agreed to provide six more instructor pilots for both the T-28 and C-47. In addition, seven students were sent to the US, while another seven (four helicopter, three fixed-wing) trainees went to Thailand. To enhance KAF's own training academy at Battambang, MEDTC during November delivered 16 unarmed T-28Bs and another four T-41s.

Perhaps the most exciting addition to KAF came in November with the arrival of 14 Helio AU-24A Stallions. (A 15th AU-24A was delivered to KAF in September 1973.) Developed under the US Air Force's *Credible*



*Chase* mini-gunship programme by Kaman, the Stallions combined a short-take off capability with the punch of underwing rockets and a side-firing 20mm cannon. Assembled at Pochentong, they were ferried to Takhli RTAFB where training for the new system was to commence the following spring.

### One Step Forward, Two Steps Back

Just when improvements were seen, KAF was dealt another serious blow. This time, problems came from within its own ranks. On March 17, 1973, Captain So Patra, a son-in-law of Sihanouk, boarded a T-28 at Pochentong and headed over downtown Phnom Penh. Circling over the Presidential Palace, he proceeded to dive-bomb the structure, then flew the Trojan to Khmer Rouge territory and landed. When the smoke cleared back at the palace, 43 were dead and another 35 wounded. Lon Nol, absent at the time, was livid. Confirming his worst suspicions about the royal family, he ordered a wave of arrests of princes, princesses, students, and teachers. He also ordered a complete KAF stand down for three days. Looking for a scapegoat, So Satto was removed and replaced by his deputy, Penn Ramnda.

The March bombing could not have come at a worse time for KAF. This was because the US Congress had dictated US tactical and strategic bombing in Cambodia would be terminated as of August 15. This suddenly left KAF with less than five months to expand to the point of being able to handle the bulk of air support for its armed forces. To do so meant overcoming the numerous challenges long plaguing the force: insufficient skilled pilots and support personnel, inadequate airfields, lack of effective leadership exacerbated by frequent changes in key personnel, and its inability to organise itself.

To improve the situation prior to the August 15 deadline, KAF began a concerted effort to improve the efficiency of its limited resources. Specifically, they wanted to improve the process for selecting bombing targets. This was not their first attempt at this. Back in October 1972, the Cambodian armed forces had formed a target selection committee with representatives from both the army and KAF. Much of the committee's time, however, was spent requesting targets for US strategic air strikes.

This time around, KAF was looking to create a Direct Air Support Centre (DASC) that would be co-located at the army's Combined Operations Centre. Initially, the DASC maintained continuous communication with US Airborne Command and Control Lockheed C-130 Hercules, relaying validation for US tactical airstrikes. Once US air power was phased out, it would perform the same function for KAF aircraft. Proposed in February 1973, it was set to start operations by April and be fully operational by July.

The DASC was not the only programme intended to improve efficiency within the KAF. In May, KAF opened an Air-Ground Operations School to train forward air guides (FAGs) from the army. During the same month, they assembled a briefing team to visit the various army field commanders and explain to them the benefits of using FACs and FAGs to control airstrikes. And in July, KAF provided FACs for a new Artillery Fire Co-ordination Centre (FCC) that would relay targets from ground commanders to the DASC.

Besides reorganising, KAF was taking on dozens of new airframes. In May, five of an eventual eight Fairchild C-123K Provider transports were turned over on paper; for the time, they remained in Thailand for repair and crew training. Arriving in Thailand during the same month were six UH-1G gunships given under an accelerated US delivery programme called *Nimble Voyage*.



Above: Insignia worn by KAF UH-1G crews. This motif was also painted on the noses of all KAF chopper gunships.





*Above: A Cambodian soldier trained in South Vietnam as a Forward Air Guide, 1973. He wears a jumpsuit and ballcap from the USAF 20th Tactical Air Support Squadron. (via Kenneth Bowra)*

*Below: A joint-service class of Cambodian military personnel trained in C-123 air drop delivery techniques at Udorn RTAFB in 1974. (via John Koren)*

## Going It Alone

On August 15, US tactical and strategic air support came to an end. To the surprise of many, however, KAF bore its expanded responsibilities rather well. With an increase of nearly 700 sorties, the T-28D rate was more than double that of July (no doubt helped by the arrival of an additional 12 airframes in August). Impressive, too, was the sortie rate for the newly-integrated C-123K transports, which managed to fly 94 support missions, including highly accurate air drops of food and ammunition. The UH-1G gunships, too, showed immediate promise.

Despite this early strong performance, there was some reason for immediate concern. For one thing, a Stallion had crashed on a rocket pass, leading to restrictions on its use of rockets and hampering KAF's ability to provide close air support.

For another thing, the DASC concept was not living up to expectations. This was because the old system of using the KAF Air Operations Centre (AOC) at Pochentong to launch pre-planned missions still prevailed, with the AOC commander unwilling to turn over responsibility to the newer DASC. In addition, the ground forces understandably did not trust the KAF's inexperienced FACs to direct close air support. This point was driven home in October, when a T-28 accidentally hit friendly troops, killing 20. And even if a ground commander did want to make use of a FAC, only about five of the KAF's 21 O-1Ds were mechanically fit.

To top off KAF's worries, on November 19 a disgruntled KAF lieutenant, Pich Lim Khun, took his T-28 over the Presidential Palace and began bombing. Anti-aircraft gunners tried to respond, but their Chinese-made weapons, not fired for three years, were hopelessly jammed. As with the March incident, Lon Nol (again, not in the palace at the time) ordered a bombing stand down and a letter of resignation from the KAF commander. He also ordered that the lead aircraft in future T-28 formations be forbidden from carrying anything but smoke rockets and bullets, and that he must shoot down any wingmen that deviated toward downtown Phnom Penh. This rule removed the best KAF pilots from the active strike role, resulting in less ordnance being dropped and with less accuracy.

The November bombing might have been a devastating blow to KAF. However, a silver lining had appeared in the form of the new KAF commander, Brigadier General Ea Chhong. A French-trained transport pilot, Ea Chhong







*Khmer Rouge guerrillas posing in front of a civilian C-47 destroyed at Pochentong airbase, April 1975.*

brought with him an unexpectedly high level of leadership never before seen in KAF. Under his lead, sortie rates began to soar. By January 1974, T-28Ds alone were flying 40 missions a day. Most of this effort was for close air support, showing increased army confidence in KAF. Similarly, the Stallions, which already had their wing rockets fixed by a Helio technician, flew 62 night missions during the month, much of it for troops in contact.

Throughout this period, KAF was still being generously supported by allied powers. Taiwan, for example, offered five complete C-47 crews in November 1973, which were intended to fly transport missions thereby enabling Cambodian crews to fly the AC-47s. (When security questions could not be answered to satisfaction, however, the Taiwanese were repatriated in February 1974.)

MEDTC, too, was working hard to make the KAF self-sufficient. In a programme known as the Tactical Air Improvement Plan - Cambodia, the US once again expedited the delivery of airframes. In January, for instance, seven more *Hueys* arrived, including one in the gunship configuration and four more with gun mounts and rocket pods installed to allow for quick conversion to the gunship mode. In addition, ten more T-28Ds — albeit in poor condition — were added to the KAF inventory at the end of February (one of the aircraft had 40 grounding items after initial inspection).

## Reaching a Peak

As of mid-1974, KAF still had its share of problems. Its night support capability, in particular, was lacking, with its AC-47s and chopper gunships showing limited ability and the Stallion beset with a long list of technical problems (in August, only one AU-24A was operationally ready as a weapons platform).

Still, by almost all accounts, KAF was fast becoming a mature, competent air force. Its transport fleet, led by the C-123Ks, were handing in strong, consistent performances. Their aerial delivery methods were simple yet effective. For drops, they used visual references while flying at 4,500 to 5,000ft (1,371 to 1,524m). From such low altitudes, recovery rates ran as high as 98% and exposure to anti-aircraft fire was reduced. By September, C-123s using these tactics were able to successfully assume responsibility from the USAF for air drops to the besieged provincial capital of Takeo.

The T-28s, too, were showing their mettle. Much of their effectiveness was because they were being increasingly directed by O-1D FAC aircraft. This led to some dramatic results. In July, for example, a flight of ten T-28s, controlled by a single O-1D, was able to hit a truck park in Kratie province and, based on post-strike photos, destroy 125 vehicles. In September, while

flying a record 175 sorties a day, T-28s under FAC control were credited with helping turn back the Khmer Rouge tide in Kompong Chhnang province.

The expanded role of FAC spotter aircraft reflected a more general improvement in co-operation between the army and air force. Despite the continued inability of the DASC commander to redirect air strikes from pre-planned ones, by September the army was showing a willingness to engage in more tactical planning with the KAF. Building on this, the KAF Director of Operations announced that month that he intended to put a pilot with every major ground unit (a virtual impossibility given the KAF's dearth of trained men).

Just when KAF began to show serious improvement, the US government in October, as part of its overall programme to extract itself from Southeast Asia, drastically cut aid to the Cambodian armed forces. Under new guidelines handed down through MEDTC, KAF was not supposed to spend more than \$82,000 a day in ammunition. This translated into an emergency conservation programme whereby T-28, Stallion, and *Huey* gunship sorties would be slashed to 49, 6 and 10, respectively.

These cuts came at a bad time for the Khmer Republic. In January, the dry season was set to begin, a time normally associated with a sharp rise in Khmer Rouge attacks. Already, the Khmer Rouge had managed to grab control of much of the countryside, leaving the Lon Nol government holding a handful of cities bloated with refugees.

To feed and defend these enclaves, the Khmer Republic depended on air bridges and, in the case of Phnom Penh, Mekong convoys coming from South Vietnam. As these river convoys were exceedingly vulnerable to Khmer Rouge shore gunners, the KAF was being increasingly utilised for maritime convoy protection. Unfortunately, much of the planning for these operations was made without KAF input. On January 7, 1975, for example, at a navy briefing on the Mekong situation, the armed forces commander, General Sosthene Fernandez, concluded by saying, "All depends on air". Amazingly, however, not a single KAF official was in attendance. Fernandez then ordered a preliminary plan be worked out between the army and navy, then shown to Ea Chhong for his approval. Said the US Air Attaché: "The most disturbing, if not distressing, aspect of this procedure is that nobody thought it unusual".

## Last Gasps

As expected, the Khmer Rouge began their dry season offensive in early





*Khmer Rouge propaganda photo showing six KAF UH-1Hs abandoned at the Olympic Stadium in Phnom Penh, April 1975.*

January. Due to the subsequent rise in lucrative targets, and the increase in tactical emergencies, KAF ammunition limitations were immediately waived.

Along with the removal of bombing limitations, KAF benefited from a number of eleventh-hour improvement schemes. To boost its transport capabilities, six more C-123Ks arrived early in the year. (Two of the C-123Ks delivered earlier had been lost in accidents during 1974.) At the same time, a US Air Force Mobile Training Team came to Thailand during January to train ten more C-123 crews and 100 more mechanics. Plans called for the C-123 fleet to reach 18 by July, with KAF then becoming fully self-sufficient in airlift operations.

To improve other elements of KAF, Project *Fly Catcher* — a one-time repair of the T-28 fleet — was conducted by a USAF team at Pochentong in January. This came on the heels of Operation *Rotor Head Express*, a similar effort by a US Army team to repair the KAF's UH-1H inventory the previous summer.

Other plans called for select KAF T-28 crews to become proficient in night and instrument flying. To that time, most KAF fighter pilots flew classical box patterns using high-angle delivery. This high angle was used for all ordnance, which reduced the effectiveness of napalm and similar lay-down weapons. Mutual fire support and random rolls were never practised. To correct this, a USAF team was set to begin advanced instrument and night instruction at Udorn RTAFB later in the year.

Before any such class could be started, however, the war entered its final stretch. Pinching the Mekong lifeline, the Khmer Rouge by February 9 had sank 19 supply vessels over the previous ten days. Slowly, the remaining army positions along the Mekong began to fall. Worse for the residents of Phnom Penh, Khmer Rouge rocket teams on the eastern side of the Mekong had got within range of the capital. On March 13, 107mm rockets rained down on Pochentong, igniting an ammunition dump and destroying a storehouse for air drop parachutes.

With KAF C-123s no longer able to support the various enclaves still held by the Khmer Republic, the US government loaned a number of C-130s to William Bird, a private contractor who for years had operated an airline in Laos in support of CIA operations. Flying under the name of BirdAir, the C-130s took over a major portion of out-station resupply in Cambodia in March. Despite the intervention of BirdAir, there was no turning back the Khmer Rouge. On April 2, the last government garrison on the Mekong fell, sealing the chances of running another Mekong supply convoy. In his last radio communication, the garrison commander, General Lim Sisaath, called in a T-28 strike on himself.

With the situation looking bleak, KAF began to experiment with new ordnance to halt the Khmer Rouge advance. For example, T-28s began employing CBU-55s and CBU-49s against Khmer Rouge rocket positions to good effect. In addition, the Stallion began using CBU-25s and Mk 81 bombs, adding greater firepower to night operations.

In perhaps the most inventive modification, the C-123K fleet was used as bombers. For these missions, Mk 82 bombs were loaded one, two, or three to a pallet with the arming wires attached. As they rolled out the back ramp, the arming wires were pulled. Similarly, CBU-25s were stacked flat, 19 to a pallet. Upon exit, they were thrown clear and dispersed by the tumbling pallet. Up to 21 Mk 81s or 190 CBU-25s were carried on each C-123 bombing mission. Thirty-four such sorties were flown during night hours in March.

Despite these innovations, early April brought more bad news for the Khmer Republic. By April 7, Phnom Penh was within Khmer Rouge artillery range. Five days later, the US Embassy staff were whisked by choppers out of the capital. The BirdAir aircraft was put on hold. Four days after that, with Khmer Rouge guerrillas moving into the Pochentong control tower, KAF T-28s dropped napalm around the airfield and headed for Thailand.

In the city, meanwhile, the remaining UH-1H fleet had been assembled inside the Olympic Stadium. The pilots waited as the final remaining generals prepared to flee. When the time came, however, only four of the choppers were operable. These then took to the sky and headed toward the Thai border.

By April 18, a total of 22 KAF aircraft had been evacuated to Thailand over the previous day. Joining dozens that had evacuated earlier or were already in Thailand for repairs, a total of 97 KAF aircraft had made it outside of Cambodia. This left exactly 100 aircraft still in the country, including 22 T-28Ds, six AC-47s, nine Stallions, and two dozen UH-1Gs and 'Hs.

Judged by most outside observers to be the most professional branch of the Cambodian armed forces, the KAF had seen daily combat action for over five years. Many rated their skills to have nearly approached the levels seen in the Thai or South Vietnamese air forces. While their cause was ultimately a lost one, the men of the Khmer Air Force could claim much of the credit for allowing their republic to last as long as it did. ☐

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