

November, 1970

Army Aviation



Sling shot

(see back cover . . .)



LYCOMING DIVISION
STRATFORD, CONNECTICUT, 06497



By Major Roger W. Waddell

Wanted! Test Pilots!



IF you have a strong college background in engineering and diversified flight experience, the Army Aviation Engineering and Flight Testing Program needs you!

Perhaps you are not familiar with this program. This is the program through which aviators are trained and utilized as engineering test pilots and will be referred to in this article as the Army test pilot program.

Generally unaware of the program, Army Aviators should know that it is described in one of the 350-series DA circulars. This circular gives the prerequisites for attending the U.S. Naval Test Pilot School at Patuxent River, Md., and the procedures for applying. Although the Naval Test Pilot School is used now, other schools have been used. The first Army Aviators to graduate from a formal test pilot school graduated from the USAF Aerospace Research Pilot School in December, 1960 with the first Army Aviator graduating from the U.S. Naval Test Pilot School in June, 1961 and one aviator from the Empire Test Pilot School in England.

After graduating from test pilot school, the

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Army Aviation

NOVEMBER 15, 1970

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Command and Staff

"Command and Staff" is a new column listing the forthcoming assignments and positions of those active and retired personnel affiliated with Army Aviation who are in the rank of colonel or above. Residence information on those listed may also appear in the "Takeoffs" column.

Lieutenant General George I. Forsythe, as Special Assistant for Modern Volunteer Army, Office of the Secretary of the Army, Washington, D.C. 20310.

Lieutenant General John Norton, as Commanding General, U.S. Army Combat Developments Command, Fort Belvoir, Va. 22060.

Lieutenant General Robert R. Williams, as Assistant Chief of Staff for Force Development, Dept. of the Army, Washington, D.C. 20310.

Major General G. P. Seneff, Jr., as Deputy Director, Project MASSTER, Fort Hood, Texas 76544.

Colonel Keith J. Bauer, to Unit #1, P.O. Box 646, New Cumberland, Pa. 17070.

Colonel Garrison J. Boyle, III, to Anniston Army Depot, Anniston, Ala. 36201.

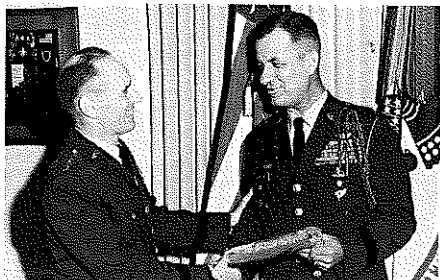
Colonel Colin D. Ciley, Jr., as Director, Department of Rotary Wing Training, USAAVNS, Fort Rucker, Ala. 36360.

Colonel J. Y. Hammack, as Deputy Assistant Commandant, U.S. Army Aviation School, Fort Rucker, Ala. 36360.

Colonel Samuel D. Kalagian, as Director, Department of Special Aviation Training, USAAVNS, Fort Rucker, Ala. 36360.

Colonel Thomas E. Thompson, as Director of Aircraft, Hqs, USAMATCOMED, APO New York 09052.

Note: Submit "Command and Staff" listings directly to ARMY AVIATION, 1 Crestwood Road, Westport, Conn. 06880.



WASHINGTON, D.C. — GEN Bruce Palmer (left), Vice Chief of Staff, U.S. Army, is shown presenting the three star flag to LTG John Norton, newly assigned as Commanding General, U.S. Army Combat Developments Command, Ft. Belvoir, Va., on the latter's promotion to Lieutenant General on October 22. General Norton previously served as Deputy Director of Project MASSTER at Fort Hood, Tex.

Question: Can a Redeyed Cobra knock down an enemy high performance Jet?

"Radar control."

"Tallyho."

"Bogey at 10 o'clock."

"Roger. Start your attack."

With these words Army Aviation history was written in the sky above the rugged 175,000-acre Hunter Liggett Military Reservation near King City, Calif.

Chessboard in the sky

Hunter Liggett Military Reservation is often called Combat Developments Command's (CDC) "*Chessboard in the field*" because here theory becomes reality when scientific-military experiments conducted by CDC's Experimentation Command (CDCEC) validate future combat developments. Now a new experiment, *Attack Helicopter-Air to Air*, has expanded this "chessboard" into the sky.

Attack Helicopter-Air to Air is part of a series of attack helicopter experiments designed to determine the vulnerability of the attack helicopter to enemy high-performance aircraft (jet fighters) and other enemy attack helicopter systems.

Another phase will include the effect of friendly anti-aircraft artillery support, weather, human factors, operating procedures, and topography on the durability of the attack heli-

copter in a hostile environment. Each part of this series of experiments is related but played separately to provide an exploratory base for a successful, scientifically valid experiment.

This revolutionary concept of air-to-air duels between attack helicopter (*Cobra* AH-1Gs) and U.S. Navy jet fighters (F8s) was designed as part of a representative "enemy" threat. The threat scenario was placed in a typical combat situation and each phase was treated as a tiny piece of a larger mid-intensity conflict until all available data was milked from the experiment. The data derived will ultimately contribute to arguments advancing or refuting the concept that the modern attack helicopter can survive in an environment such as anticipated for the timeframe concerned.

Soldier-scientist team

The key word is data. The importance of data was emphasized by Major William E. Calvert, operations officer for the experiment. "*The heart and soul of experimentation*," he said, "*is instrumentation*." Major Calvert is an Army Aviator assigned to the Office of the Deputy Chief of Staff for Experimentation at CDCEC and a member of Team IV, which is responsible for the overall conduct of the *Attack Helicopter-Air to Air* experiment.

An experiment of this magnitude receives support from CDCEC's total resources. This includes \$23 million in instrumentation on



AAAA FOUNDATION OFFERS \$4,100 IN SCHOLARSHIP AID

The AAAA Scholarship Foundation announces the availability of \$4,100 in 1971 scholarship assistance funds for the sons and daughters of members and deceased members with an effective date of membership on or before March 31, 1970.

Students applicants are asked to request the appropriate application forms by writing to: AAAA Scholarship Foundation, Inc., 1 Crestwood Road, Westport, Conn. 06880. The applications, together with other supporting application data, must be returned to the Foundation on or before March 1, 1971 to receive Awards Committee consideration.

ELIGIBILITY

Eligibility requirements have been minimized. The AAAA applicant must be: (1) the son or daughter of a member or a deceased member with an effective date of membership on or before March 1, 1970; (2) a high school graduate or senior who has made application to an accredited college or university for Fall, 1971 entrance as a freshman, or who has been accredited for freshman enrollment in the Fall of 1971; and (3) unmarried and a citizen of the U.S.

FINAL SELECTION

Selection of scholarship award winners will be made by the AAAA National Awards Committee, a permanent standing committee of the National Executive Board of the AAAA that has been designated by the Foundation to serve as its judging agency. The selection will be made during the month of March, 1971, with the winners to be notified by April 1, 1971.

BACKGROUND

A separate non-profit educational activity created to administer scholarship assistance for the children of members, the AAAA Scholarship Foundation, Inc., was incorporated in December, 1963. With the provision of 20 scholarships in 1970, the Foundation has provided \$26,450 in direct aid to 80 children of members and deceased members since the program's start in 1963.

site at Hunter Liggett. Instrumentation in its broadest sense includes all the electronics, telemetry systems, wire, radio, and radar used in various combinations to produce data for each experiment.

One of the first steps in any kind of experiment is planning for the instrumentation. At CDCEC this is done by a soldier-scientist team consisting of mathematicians, engineers, human behavioral specialists, and military professionals. They provide the insight and skills necessary for systematic research that will lead to a final result. Nothing is accepted as fact until it is proven. They decide what form of usable data is required and the instrumentation design necessary to produce that data.

Once the experiment starts, additional "seat of the pants" engineering is furnished by the Engineering Laboratory of the Deputy Chief of Staff for Instrumentation. They make repairs of adjustments to the designed instrumentation system and, when required, laboratory personnel manufacture equipment to meet new requirements. Once instrumentation has been procured or manufactured, the next step is the marriage of man and machine.

Man, in this instance, is represented by the team. The team is anyone and everyone. The private first class situated on top of a hill, keeping the radar warmed up around the clock for tomorrow's mission, is on the team. The Lieutenant Commander from Squadron VX4, U.S. Navy, who flies his jet fighter from Point Magu, Calif., to the airspace over Hunter Liggett is part of the team. Instrumentation can only work when a human tells it what to do and when.

Pilot selection is critical

Since this experiment concerns the vulnerability of the attack helicopter and the man-machine relationship (*Cobra*-pilot), selection of the pilot was a critical consideration. Selection was based on combat experience in Vietnam and 1,000 hours flying time in the *Cobra*. The pilots are from the 3rd Aviation Company (Attack Helicopter), Yuma Proving Grounds, Yuma, Ariz.

John O. Duffy, a human behavioral expert from Litton Scientific Support Laboratory, debriefs these pilots after each mission and

receives the personal account of what happened in the air. Duffy has a degree in physics and a Master's Degree in experimental psychology. He is also a pilot with 2,600 hours in fixed and rotary wing aircraft. He can communicate with them and understands the human emotion of simulated combat.

Competitive spirit

Simulated air-to-air combat is not boring, according to CW2 Randall L. Duncan, a veteran helicopter pilot: "*Each trial is a new experience for us and we enjoy the competitive spirit between the Navy jets and other attack helicopters.*"

Warrant Officer Randall and his co-pilot, CW2 Wesley E. Bean, pioneered the study of air tactics in the early stages of this experiment. The Redeye Air Missile System (RAM) is the principal weapon used on the *Cobra* AH-1G and it is a heat-seeking missile. During the trial or test, gunnery results are recorded on film that is later screened to determine the validity of claims by the combatants.

In addition to gun cameras installed on the aircraft, radar pilots and time-tagged events are recorded during the action.

Computer decides outcome

Back-up support comes from another team of four pilots who monitor all radio transmissions and push predetermined coded buttons as different events occur. All coded signals, radar tracings, and voice communications are fed into a *Data Acquisition and Recording System* (DARS). DARS is used to collect analog, digital, and even information from up to six remote locations, transmit this data to a central control and recording facility, where the information is system time-tagged and organized in a selected sequence and recorded on magnetic tape.

After the last mission is flown and the data collected, it is organized into machine language, and then fed into the computer which will respond to the questions programmed by man to determine if another man and his machine can survive in a hostile environment of a mid-intensity conflict during the 1975 time-frame. Final answers are always human decisions based on valid scientific experiments designed to provide "Vision to Victory."

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we're building into
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GENERAL  ELECTRIC

205-15

ABOUT 2,500 years ago, a man named Aesop told the tale of a fox which, unable to jump high enough to reach a bunch of juicy grapes, finally slunk from the scene, muttering that the fruit was probably sour anyhow.

This Reynard attitude is still around, and there are those who, aware of the difficulties besetting our lone helicopter development program, are willing to drop it, declaring that it probably wouldn't be any good anyhow.

The difficulties encountered by the AH-56A *Cheyenne* are legion. They are eloquently expressed by Senator McIntyre on Pages S 12192-3-4 of the *Congressional Record* dated August 6, 1970. Senator McIntyre is, among other things, the chairman of the R&D sub-committee of the Senate's Armed Services Committee and digs deeply into military research. Summarized, his points were these:

Against

- Lockheed, the manufacturer, is in a precarious financial position.
- The *Cheyenne* has had developmental problems; production was cancelled in May of 1969 because of those problems; and to the present, no one has proven to his satisfaction that the system is operationally ready.
- The USAF has long had the responsibility for close air support and is now seeking to meet that responsibility by developing a system known as the *A-X* which is forecast to be less expensive, more reliable, with greater

lethality and greater survivability, and with a lesser need for change in the existing force structure.

- The Army has an excellent gunship in operation now: the AH-1G *Cobra* which has demonstrated improvement capabilities and which can accept much of the *Cheyenne's* weaponry.

Neutral

- Over \$168 million have been invested in the *Cheyenne* and much of this will be lost if the system is not put into production.

Good

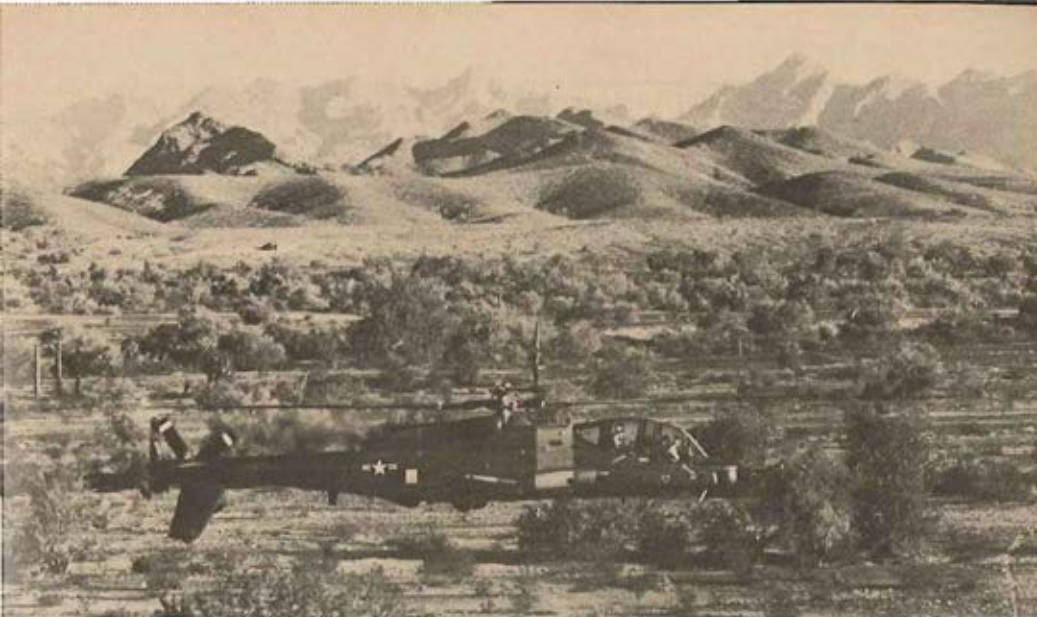
- The *Cheyenne* can takeoff vertically and can therefore operate where the troops do.
- It can operate in bad weather — weather which would ground the *A-X*.
- It has great single-shot accuracy of firing.
- It can be made available 2-3 years earlier than the *A-X*.

Evaluating this data, the Senate Armed Services Committee came to the conclusion that the *A-X* should be funded and the *Cheyenne* should not. The House Armed Services Committee, after evaluating the same data, recommended funding for both the AH-56A and the *A-X*. A following joint committee agreed with the House.

The final arbiter, of course, is in Appropriations rather than Authorizations. Here, the House permitted funding through FY '71 but demanded that one of the three "competitive"

Must another Indian bite the dust?

The *Cheyenne*, now flying and its weapons performing well, faces dollar-starvation, *Cobra* bite, *Harrier* chase, and *A-X* blows.



systems be declared best prior to FY '72 funding. (*Business Week*, October 10, 1970).

At the risk of seeming to ignore the reasoned arguments expressed by the Congress, and at the even greater risk of over-simplification, let us present our own findings:

- Lockheed is in disfavor.
- The USAF is supposed to furnish close air support, and they say they can do it cheaper, equally well, and without change in the existing force structure.
- Should the USAF fail, the Army can always fall back on its present equipment which has assured product improvement potential.

Aesop . . . again!

The first two findings represent an updating of the old Aesopian fable. In the first, the fox elects to burn down the arbor and attain two ends. He can make certain that no one else obtains the grapes and he can also ensure that no one can dispute his contention that they are sour. If the *Cheyenne* is allowed to disappear, then no one else can use it and thus prove we were wrong in turning it down. In the second finding, the fox, determined to get something for his efforts, proceeds to a neighboring farm and eats blackberries. There is

SPEEDY CHAMELEON — An AH-64A *Cheyenne* attack helicopter flown by Lockheed test pilots blends with the desert sagebrush as it hugs the terrain during recent flight and firepower demonstrations at the Army's Yuma Proving Ground, Arizona.

(Lockheed)

equal similarity between the *A-X* and the *Cheyenne*.

Any attempt to match the increased capability of aerial vehicles to support ground troops with the order of their appearance in time contains both fixed and rotary winged aircraft, and it exposes a series of blank areas from the mid-'70's onward. Since increased capability is obviously a subjective judgment, there will be quarrels with the relative replacement of systems. It will be much more difficult to find fault with the time period during which useful support is available, and even more difficult to quarrel with the conclusion that the greatest capability is achieved through the use of VTOL equipment. As usual, there are many options or alternatives available.

Figure 1 is an attempt to delineate those alternatives within a duplicative time frame. This, too, can elicit argument — all possible alternatives cannot be shown in a single portrayal, and a concerted effort can certainly change the year of availability — yet, it is difficult to argue against the conclusion that

ANOTHER INDIAN?

(Continued from Page 9)

all useful alternatives lead to light, medium, and heavy aerial fire support. All three are not attained from a single system.

Once it is accepted that no single system can meet all requirements for all Services for all intensities of conflict in all possible environments — and surely, we don't need to go through "commonality" again so soon — it then becomes apparent that systems which do not compete in the same categories of support do not compete at all.

The *A-X* will, hopefully, improve upon the capabilities of the A-1, A-7, A-37, AC-47, AC-119, AC-130, H-3 and UH-1. It will not compete with the *Cheyenne* since they operate in different categories of support.

AV6B is competitive . . .

A possible competitor is the AV6B *Harrier*. Chairman Mahon thinks so; Senator Goldwater does not. On page S12916 of the *Congressional Record* he explains that the Navy must supply close aerial fire support to amphibious landings or to Marine operations ashore from organic equipment assigned to the Navy. General Ryan of the Air Force agrees. In testimony before a sub-committee of the House Appropriations Committee (Page 648), he explains that the AV6B, though suitable for Marine operations, lacks both the payload and the range required of equipment needed to implement the Air Force concept of close air support.

. . . but A-X is not!

The AV6B could be competitive with the AH-56A, but the *A-X* is not in competition with either. These are reasons not enumerated by General Ryan:

- It does not depart or land from the same location as the ground forces it supports.
- It does not react to the same stimuli as the forces which it is intended to support.
- It does not live in the same environment.
- It is not endangered by the same enemy actions.
- Its success or failure is not predicated upon the success or failure of the ground forces it is intended to support.

- It does not accept direction from the same combat source.

- It is designed to perform different jobs than either the AV6B or the AH-56A.

A second flank to cover

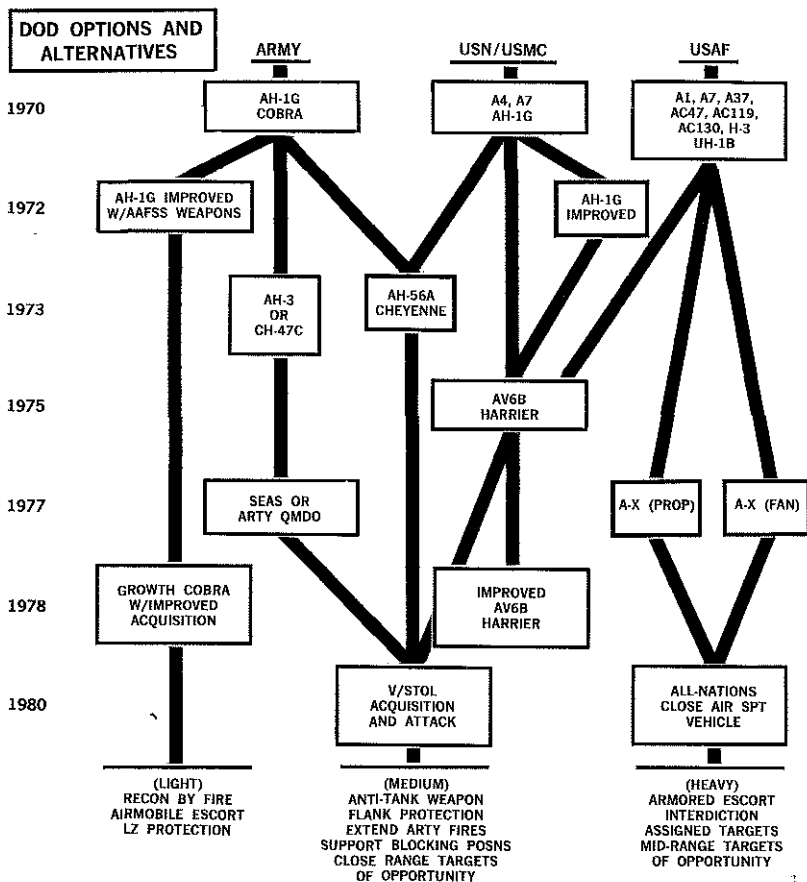
It would be exceedingly naive to assume that qualitative reasoning can prevail when the major constraint is quantitative — dollars. It is an exceedingly easy step from the desire to spend less to the acceptance of any plausible excuse for doing so. The greatest threat to the entry of the *Cheyenne* on active duty is not its replacement by another system, but rather, our presumed inability to afford any new systems. The Congressional finding that the *Cobra's* usefulness can be stretched out by picking up some of the *Cheyenne's* weaponry is a persuasive argument in a dollar-short atmosphere.

Thus, the Army has a second flank to cover if it is to hold onto its position that the *Cheyenne* is needed. That which can repulse an attack by advocates of the *A-X* (competitive systems) is not applicable to the threat from the *King Cobra* (lack of need). The pro-*Cobra* arguments range from the acceptance of a less ambitious tactical concept to the promise of great cost savings. This assumes that for *Cobra*-capable employments, *Cobra* is more "cost-effective", and that *Cheyenne* employment benefits beyond *King Cobra* capabilities are not really needed.

Cost differential

We are often told that the cost difference is on the order of 5:1 in favor of the *Cobra*. This is somewhat overstated. The comparison is similar to comparing the costs of a used Chevrolet to those of a new Pontiac. The actual costs of ownership must include the costs of operation as well as those of purchase. On this, a sounder basis, the total cost difference between systems is on the order of 2:1, still in favor of the *Cobra*.

Thus, the *Cheyenne* needs only prove itself to be twice as effective in order to be a good buy. Its proponents insist that this has been proven, re-proven, and re-re-proven. They point to a mid-intensity threat (not necessarily in Europe) which is matched by performance characteristics available only from the *Chey-*



enne; to the need for anti-tank weaponry; to a fire control system which attains a degree of accuracy not available from any other system; and to a round-the-clock capability with a terrain-hugging performance which adds to survivability as well as to effectiveness.

Only three arguments

Cheyenne proponents suggest that there are only three legitimate arguments which, if true, would negate the need for the machine:

- The *Cheyenne* does not fully meet the total AAFSS performance characteristics, and those characteristics remain a requirement for immediate fulfillment. (Approval QMR).

- The *Cheyenne* is too sophisticated for field maintenance by Army mechanics. ("Can We Field The *Cheyenne*?" ARMY AVIATION, January 31, 1970).

- The probability of mid- or high-intensity conflict is so low as to make planning and equipment development both unnecessary and undesirable. (No reference)

No other argument is germane.

Germane or not, other arguments will continue to be used. If our lone Indian, the *Cheyenne*, is to survive, he must fight off dollar-station, *Cobra* bite, *Harrier* chase and *A-X* blows. That's a real challenge.

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Yesterday

THE first rotary wing aircraft procured in quantity by the U.S. Army Air Force was the Sikorsky S-4. Although the AAF had accumulated years of experience in the training of fixed wing pilots, the state of the art for rotary wing aircraft in 1944 was such that civilian industry had acquired the majority of the experience available, primarily through their experimental and developmental efforts.

Contract with Sikorsky

When the decision was made by the Army Air Force to establish a rotary wing school, a contract was made with the Sikorsky Aircraft Division of the United Aircraft Corporation to train the cadre. This initial training was conducted at the Sikorsky Aircraft plant located at Bridgeport, Conn. Upon completion of this training, the cadre traveled to Freeman Field, Indiana, where the first R/W school was established.

A program of instruction was developed and the first class of students arrived in the summer of 1944. The flight syllabus, consisting of twenty-five flight hours, included instruction in hovering, normal takeoff and landings, straight and level flight, and straight-

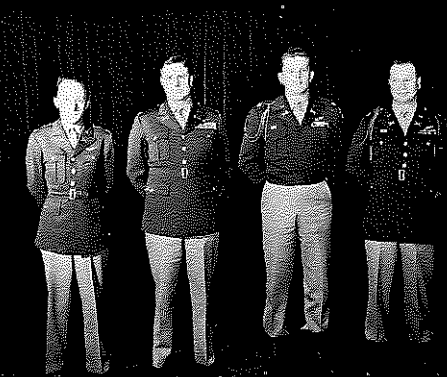
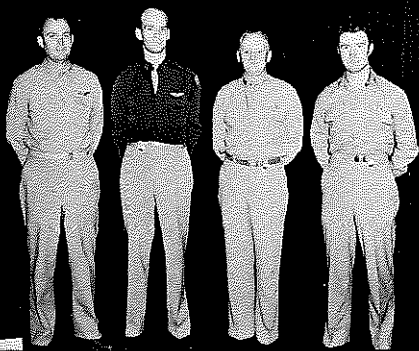


ARMY 'COPTER TRAINING, 1944-1954

BY COLONEL JACK K. NORRIS,
U. S. ARMY, RETIRED



First AAF R-4 for instructional purposes



in, flare-type autorotations with a power recovery. Aerial touchdown autorotations were not performed at the school and were not included in the curriculum.

First mass move

In the winter of 1944, the school moved from Indiana to the airfield at Chanute, Illinois. This move occasioned the first mass cross-country flight conducted by helicopters. Chanute Field was a temporary location and in the following Spring, the rotary-wing school established its residence at an airfield located at Wichita Falls, Texas.

Here the instructors first encountered the ubiquitous problem of high density altitude and low powered helicopters. One class was soloed without receiving any instruction in hovering. Running takeoff and landings were the rule. Only by exploiting the early morning hours when cool temperatures prevailed were the instructors able to teach hovering.

Quantity production

By 1945, the development of the helicopter had reached the stage whereby several manufacturers could produce their machines in quantity. At this time the Army Ground Forces made arrangements with the AAF for twelve quotas in helicopter training. The purpose of this request was to investigate the problems associated with the training of pilots and the testing of rotary wing aircraft.

The first AGF pilots started their training in the summer of 1945 and the last four

completed their training in the summer of 1946. By this time AGF had made definite commitments for procuring and testing the Bell Aircraft H-13. At the time of the procurement, arrangements were made with Bell to train pilots for the AGF.

Joe Dunne, one of the Army Air Force officers who helped organize and instruct in the first AAF helicopter school, was subsequently employed by Bell to establish a training school. Joe established his school for the H-13 along the same lines as the AAF flight syllabus with one major exception. The problem of a student having to make a power-off landing in the helicopter had bothered Dunne since the day he became associated with helicopters. When he arrived at Bell and observed the ease with which Floyd Carlson and Joe Mashman performed touchdown autorotations in the H-13, he included this maneuver in his flight syllabus.

A four-officer class!

The first pilot class conducted by Bell for the AGF started 23 September and ended 4 October 46. This class was composed of four officers who had previously completed the training conducted by the AAF. Their Bell training consisted primarily of a transition into the H-13.

Subsequent classes conducted by Bell for the AGF were composed of pilots with no previous experience in rotary wing aircraft. The first class in this category, consisting of four students, started on 3 March and gradu-



FAR LEFT: The first group of Army officers to be trained by Bell were, left to right, LT Yeats, CPT Rankin, CPT Doaks, and LT Hammack. All had completed AAF helicopter school training prior to attending the Bell course. **LEFT:** The first group of Army officers with no previous helicopter training to attend the Bell course were, l-r, CPT Gaddis, LTC Marinelli, MAJ Blohm, and CPT Gerard. **OPPOSITE:** End of flight. First mass cross-country movement of helicopters from Freeman Field, Indiana, to Chanute, Illinois, in 1944. (All photos by courtesy of LTC James W. Hill, Jr.)

ated on 28 March 47. These students received an average of 23 flying hours.

The instructor comments in reference to the students' ability to perform the various maneuvers are sketchy; however, all received instruction in taxiing, level flight, climbs and glides, hovering, sideward and rearward flight, takeoffs, landings power approaches, autorotations, and rapid decelerations. According to the records on file at Bell, all students soloed at approximately the seven-hour level. Bell conducted training for a total of six classes for the AGF, with the last class starting training on 20 June 47.

By late 1947, the AGF had established the requirement for a continuing training program in rotary wing aircraft. Agreements were made with the Air Force to conduct this training, since the responsibility to conduct primary flight training was still assigned to that military department.

During the latter part of 1948, it was de-

ecided by AGF that the training program in rotary wing aircraft would be expanded to include instruction in the tactical operations of the helicopter. The responsibility for conducting this training was assigned to the Air Training Department, The Artillery School, Fort Sill, Okla. Students graduating from the training conducted by the Air Force at San Marcos, Tex., were placed on TDY at Fort Sill for completion of the tactical phase.

The individuals responsible for developing the flight syllabus for the tactics phase were graduates of the Bell training course. They realized the importance of the touchdown autorotation as a training maneuver and therefore made a determined effort to include it in the program. They were successful and this maneuver has become an integral part of the helicopter training programs conducted by the U.S. Army today.

Night operations

In addition to the touchdown autorotations, the tactics phase included instruction in steep approaches, maximum performance takeoffs, confined area operations, pinnacle operations and night operations. The night operations also included touchdown autorotations and approaches to a flashlight.

In the middle 50's, the Army won the right to conduct its own primary flight training. The USAPHS and USAAVNS programs in existence today represent the progress accomplished to date.

ARMED Aviation has made unprecedented progress in the past nine years. In the late '50's and early '60's Army Aviation was a mere infant.

Those of us who were in the service then remember it as a time in our history when the Army Aviator didn't exactly bask in a pool of prestige in the eyes of his nonrated contemporaries. Ask almost any ground-oriented careerist of that era what his opinion of an Army Aviator was then. He will probably tell you that he pictured an aviator as someone (usually overweight, wearing unshined boots) who earned his flight pay but hardly qualified for his base pay.

New lease

Then, in 1961 General Maxwell D. Taylor was sent to Saigon as President Kennedy's envoy to the Republic of Vietnam. His task was to analyze the situation in Vietnam and to return with a recommended course of action that would strengthen the free world position in Southeast Asia. One of these recommendations changed the destiny of Army Aviation and, as a by-product, Army Aviators got a new lease on career development. General Taylor favored the idea of providing our Vietnamese allies with increased mobility.

In response, the 8th and 57th Transportation Companies (Lt Hel) embarked from the California coast with a combined total of 42 CH-21 *Shawnees*, that were destined to change the course of tactics, concepts, equipment developments, and the course of history for the Army. Airmobility became a way of life for our modern Army. The Vietnam war has accentuated the need for a highly mobile Army and Army Aviation has stepped from the background to become a most vital and integral member of the Army team.

While Army Aviators deservingly enjoy their present status, it might be appropriate to look ahead — beyond Vietnam — to insure we avoid the possibility of ever again being regarded as unprofessional.

We pride ourselves on being professionals when we're at the controls of an aircraft. *Do we take the same pride in being officers and soldiers, or do we return from a hard tour in Vietnam with a chest full of ribbons and "cool it" by living on our laurels?* If the latter, we should snap back to reality and realize that we are soldiers first and aviators second.

We can never again afford to be viewed as pilots only, but must maintain the versatility that our nonrated counterparts have come to expect from us. This can only be done by applying an *ounce of professionalism* to everything we do, a very hard thing to do at times because of several factors.

Familiarity, discipline

In aviation, officers of all grades work, in many cases, directly with enlisted men and the tendency develops to become overly familiar. We expect our crew chiefs and mechanics to be less than immaculate around the shop and flight line; however, these same men are occasionally given non-maintenance assignments and still present somewhat less than a military appearance on and off the job.

Too often laxity resulting from the acceptance of soiled uniforms overlaps into areas like long sideburns, avoidance of saluting, and reluctance to use the word, "Sir," and so on. Some aviation units, on the other hand, issue their enlisted men coveralls or old fatigues for maintenance duties and expect high standards in appearance away from the flight line and often get an extra margin of courtesy and discipline as well.

An Ounce of Professionalism

By Major Larry W. Joyce, U.S. Army, Infantry

Leaders through the years have recognized that soldiers both expect and respect high standards. Successful leaders get results that make them successful by setting and demanding high standards. They have also pointed out that morale is higher in units that require a high degree of professionalism from every man. Certainly, these demands should be reasonable and tempered with other good leadership traits. An aviation unit can and should maintain the same high standards in appearance, courtesy, discipline, and the other basic soldierly arts as a well trained infantry or armor unit does. This can only be achieved by constant "on-the-spot" corrections by every responsible soldier. However, the importance of these corrections is often overlooked at some installations. *Have some of us become so accustomed to uncorrected faults that we begin to accept them as the norm?*

Spit and polish

Of course, officers, warrant officers and noncommissioned officers must continually set the example if they expect high standards from their subordinates. At times it appears that the permissiveness prevalent in our modern society is creeping into the hallowed ranks of our officer and noncommissioned officer corps.

This fact, if it is indeed a fact, should be countered immediately by every man who respects his uniform and what it stands for. Physical fitness used to be and should always be a mark of a truly professional soldier — be he airborne or quartermaster. In a garrison atmosphere a spit shine and highly polished brass compliment a sharp uniform and identifies a professional who has pride in himself, his uniform, and his unit.

Most commissioned officers, warrants with experience, and senior noncoms have learned these basic facts and need only to keep them current and practice them habitually. *But what about the inexperienced warrant with the limited military background of Basic Training, AIT, and Flight School? What about the graduate of the Skill Development Base, the new program that takes selected men out of AIT and in 12 weeks instills sufficient technical and supervisory training to qualify a man for noncommissioned officer rating?*



Rx . . . An Ounce of Professionalism Daily

We recognize that during periods of crisis we often must sacrifice quality for quantity in certain skills. The products of this system must survive in a military environment with which they may be almost totally unfamiliar. We expect then that our products learn enough "on-the-job" about military life through the leadership of supervisors in the field to be useful in future assignments.

When the average warrant officer candidate pins on his bars he is 20 years old and has a limited military background. He is sent to a unit in Vietnam where he is given the status of a junior lieutenant. However, his lieutenant counterpart has four years of Military Academy/ROTC or 23 weeks' OCS experience to his credit and has been promoted to first lieutenant. The new warrant officer is welcomed into the officers club and, by virtue of his rank and association with other officers, may be expected to know more than he really does. This is particularly true when he is reassigned to another unit where a full appreciation of his previous experience has yet to be determined.

Let's consider the new warrant whose first

PROFESSIONALISM

(Continued from Page 17)

non-academic assignment is an aviation company in the Republic of Vietnam. He is promoted to W-2, returns to CONUS, and is assigned to the Aviation School with 12 months' combat experience, 1,100 flying hours, a DFC, and 23 Air Medals under his belt. His only non-flight duty was as an assistant club officer. He has mixed and mingled with other officers and may even call some captains and a few lax majors by their first names.

Group acceptance

Because of his excellent combat record he has been accepted by the group with whom he has been associated. He has faced very few discomforts out of the cockpit and has been given little responsibility away from the controls of his aircraft. He may have even been pampered to a certain extent and may have been allowed to let the hair on his head and around his lip grow a little longer than would have been acceptable in a stateside unit. He has probably received very little career development supervision. This very capable individual who has the same or better potential than his OCS counterpart will possibly suffer in the future because he hasn't been set straight sooner with proper training (academically and on-the-job) and supervision.

In a CONUS assignment he might well be expected to train new aviators and set an example for them to follow. It's going to be pretty hard for him to set a good example with his limited background *unless* he is very exceptional. Ribbons and reputation are not enough. It takes leadership, judgment, and a score of other traits that can only be obtained through experience that has been strained through meticulous and demanding supervision.

Why not tougher training?

To extend the training time of WOC's is not practicable, but to toughen the training in a more OCS type environment is feasible. Presently, WOC's are allowed to live off post with their families while officer candidates are required to live in a barracks where they can

be indoctrinated with customs, traditions, discipline, leadership, etc., in addition to scheduled training. This indoctrination may be, and certainly has been, referred to as harassment. It must be tempered, of course, with good judgment and be closely supervised to insure the product is not damaged and the desirable quantity isn't reduced.

This type of training in a more constant military atmosphere should toughen our graduate and make him more acceptable and versatile in the field. On-the-job training should continue in the field. Unit commanders should be encouraged to heap additional duties on new warrant officers just as a new second lieutenant is usually swamped when he reports into an infantry, armor, artillery battalion, and the like.

Evaluation process

Questionnaires are presently sent to unit commanders soliciting feedback information on the quality of the flying training given to our Aviation School graduates. If these commanders were requested to write a narrative description of the administrative abilities and leadership capabilities of these young aviators we might find a very definite need for more military-oriented training.

Such a questionnaire would be useful in evaluating the effectiveness of such a program if it were initiated. If this training was instituted into our candidate program we would probably find we were producing more capable products. The graduates themselves would predictably view their training in retrospect to be as useful as it was challenging. Also, predictably, more of these graduates would be given direct commissions and later integrated into the Regular Army.

The Warrant Officer Career Program should solve most of these problems for the fortunate selectees. But obviously a great deal can be done for all our aviation warrant officers long before they are selected to attend their career course.

A more equitable flight pay scale for warrants would certainly be an important factor in improving morale. There should not be such a marked difference in hazardous duty pay between warrant officers who are required by their assignment to handle the bulk of the

flying load and commissioned officers who, by virtue of their duties, do much less flying overall than warrant.

The question of warrant officer morale can be explored in more detail by considering that many warrants look at the commissioned officer corps with somewhat diminishing respect. *Is this justified?* Consider the maturity and experience level of the modern day captain with his counterpart of four years ago. Today, a second lieutenant out of ROTC or OCS attends flight school, spends a flying tour in Vietnam, returns to CONUS with little more experience than a new W-2. He, too, may have long hair and low standards and certainly may not be the object of admiration.

Continuous counsel

Field grade officers who have the necessary experience to cope with these problems are not doing their jobs if they let these situations persist. They must continually counsel their subordinates, help them prepare for future responsibilities, and assist them in career development. The officer-aviator of today must consider his aviation expertise as a qualification and not necessarily a career. The successful officer-aviator must be able to speak two languages fluently; the aviation language and the language peculiar to his respective branch.

The theory that aviators *can* speak both languages is what Army Aviation is all about. It's the name of the game. It's up to every

officer-aviator to insure it's not only a theory but a reality. How can this be done? It's very hard to understand a problem or another man's viewpoint unless you have experienced the problem or one very similar to it. Nothing takes the place of doing it, being there, having your hands on the equipment.

Seek branch assignments!

So, it's up to each individual aviator to get back with his branch-related problems occasionally. Unfortunately, we cannot expect as many ground duty assignments as we need, but many of us never seek them, either. All branches are interested in their officers' career patterns but often leave it largely to the individual officer to develop his own career.

During aviation assignments we can keep fairly current in our respective branches through trade magazines, correspondence courses, letters to our branch schools, etc. Any contribution in this regard can be looked on as insurance for profitable future assignments.

Everyone associated with Army Aviation should be aware that special qualifications got them into the program; that they were instrumental in taking aviation from the dark days of '56-'61; and that they have given it the prestige it so rightly realizes today, all of which should make them very proud. This pride, coupled with a quest to add an *ounce of professionalism* to their every task, will keep Army Aviation above the best.



FORT RUCKER — GEN Ralph E. Haines, Jr., Commanding General-Designate of U.S. Continental Army Command, pins Army Aviator wings on his son, CPT William L. Haines, at the latter's Oct. 6 graduation at USAVNS. A member of an ORWAC class, CPT Haines completed 32 weeks' training as a helicopter pilot. (USA photo)



FT. HAMILTON, N.Y. — BG William J. Maddox, Jr., Director of Army Aviation, OACSFOR, pins the American Legion Aviators' Post Valor Medal on MAJ Patrick H. Brady, the first soldier to receive the decoration, according to Clayton Stiles, commander of Aviator's Post 743, New York. The ceremony honoring tri-service selectees took place on October 23.



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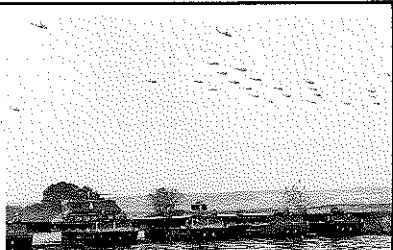
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WASHINGTON, D.C. — Three of four former "Army Aviators of the Year" attending the recent 12th AAAA Annual Meeting in Washington D.C. are shown in a recent photo. From left, LTC Emmett F. Knight ('62-'63 Aviator), MAJ Patrick H. Brady ('68-'69 winner), and former MAJ Marquis Hilbert ('63-'64 winner). Missing: CW4 Michael J. Madden ('60-'61).

USAREUR — A flight of 21 UH-1D Hueys, protectively flanked from behind by AH-1G HueyCobra gunships, crosses the Main River by air as armored personnel carriers use a mobile floating assault bridge in the foreground. Actions took place during Exercise CERTAIN THRUST, a part of the October NATO Field Training Exercise REFORGER II.

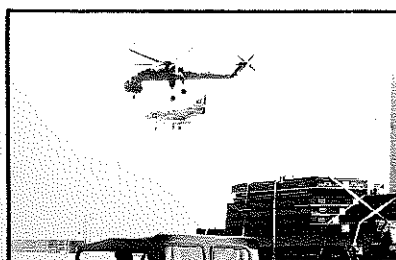
(USA photo)



FT. EUSTIS, VA. (Delayed) — Mrs. Millie Condon receives a Certificate of Honorary Membership in AAAA from COL Garrison J. Boyle, III in ceremonies held at the David E. Condon Chapter. Mrs. Condon is the widow of the Army Aviator for whom the Army Aviation Association's fifth largest membership activity — 368 members — is named. (USA photo)

HEIDELBERG, GERMANY — MG William R. Kraft, Jr., left, CG of USAREUR and 7th Army Troops, congratulates LTC James E. Rogers on the latter's receipt of his Master Army Aviator wings. A 17-year veteran with over 15 years and 5,400 hour flight experience, Rogers is G-4 at USAREUR & 7th Army Troops.

(USA photo)



PHU BAI, VIETNAM — A CH-54 Skycrane of the 101st Airborne Division (Airmobile) carries a Navy jet fighter over the Phu Bai aerial port in northern Military Region 1. A vital part of the division's air-mobility, the Skycrane is used extensively in aircraft recovery operations undertaken throughout MR 1. The action took place on October 16. (USA photo)

On Guard!

CONGRATULATIONS to the 1105th Assault Support Helicopter Company of the Iowa Army National Guard on being selected by the Army Aviation Association of America as the "outstanding aviation unit" in the ARNG and USAR.

The "Reserve Component Aviation Unit of the Year" is a new award this year and the 1105th has set a standard for others to emulate. The unit performed their medium helicopter mission in an admirable fashion, utilizing CH-37 Mojaves as substitutes for the CH-47 Chinook. If you think your unit measures up to the 1105th now is the time to start documenting it in time for next year's AAAA Awards Committee review which will take place in August, 1971.

UH-1D turnover

On 14 October the ARNG finally went *Huey!* At a ceremony at Davison Army Airfield, Ft. Belvoir, Va., LTG William Peers, Chief, Office of Reserve Components, presented to MG Winston P. Wilson, Chief, National Guard Bureau, the log books of the first five UH-1Ds scheduled for delivery to ARNG units this year.

In his remarks General Peers stressed the importance of a sound aircraft safety program. General Wilson, in accepting the first *Hueys*, stated that the ARNG welcomed the challenge to produce combat ready aviation units and guaranteed that the ARNG would,

if properly supported, produce units of equal readiness as their Army counterparts.

The aircraft were subsequently turned over by General Wilson to flight crews from the Texas Army National Guard. *UH-1s* were then flight delivered for assignment to the 71st Airborne Brigade and the 72d Mechanized Brigade of the Texas-ARNG.

Aircraft allocation plan

The NGB is in receipt of an aircraft allocation plan that provides enough aircraft to completely equip to training level those ARNG aviation units with standard A&B aircraft by end of FY73. A study group is now convened at NGB to develop the long range aircraft allocation and distribution plan. Hopefully, this is the first step in being able to program aviation support and training requirements in an orderly manner. More important, however, it marks the beginning of the long awaited inventory modernization.

FIRST UH-1D HUEYS ACCEPTED BY ARNG

By Lieutenant Colonel
DONALD G. ANDREWS
Army Aviation Branch
National Guard Bureau

DAVISON AAF, VA. — Major General Winston P. Wilson (right), Chief of the National Guard Bureau, receives the logbooks of five UH-1D helicopters from Lieutenant General William R. Peers, Chief of the Office of Reserve Components, on the October 14 transfer of the aircraft from the U.S. Army to units of the Texas Army National Guard. Ferry personnel accepting the aircraft are shown in the background.



AAAA Activities

- **Army Flight Training Center Chapter.** "Welcome Aboard Party" for BG James C. Smith, new CG, Lotts Island Recreational Area. Oct. 10.
- **Hanau Chapter.** General membership meeting. Beacon NCO Club, Fliegerhorst Kaserne. Oct. 12.
- **Nurnberg Chapter.** Business meeting. Planning for '71 Garmisch Convention. Katterbach Officers' Club. Oct. 14.
- **Fort Wolters Chapter.** Professional meeting. Wilbur A. Middleton, Embry-Riddle Aeronautical University, guest speaker. Ft. Wolters Officers' Club. Oct. 21.
- **Lindbergh Chapter.** Professional dinner meeting. MAJ Joe B. Green, USAR, guest speaker. Ruggeri's Restaurant. Oct. 23.
- **Sharpe Army Depot Chapter.** "Octoberfest!" Social meeting with surprise guest speaker. SHAD Officers' Open Mess. Oct. 23.
- **Suncoast Chapter.** Business-social meeting. Chapter business. 1970 convention report by attending delegates. MacDill Officers' Open Mess. Oct. 23.
- **Bluegrass Chapter.** Professional luncheon. BG William J. Maddox, Jr., Director of Army Aviation, OACSFOR, guest speaker. Fort Knox Officers' Brick Mess. Nov. 4.
- **Aloha Chapter of Hawaii.** General membership business meeting. Report on 1970 Annual D.C. convention. Coachman's Lounge, Schofield Barracks. Nov. 6.
- **Connecticut Chapter.** AAAA Family Day at West Point; Tailgate Picnic and attendance at Army-Syracuse football game. Nov. 7.
- **Delaware Valley Chapter.** Professional-social dinner meeting. LTG Robert R. Williams, Asst Chief of Staff for Force Development, guest speaker. Alpine Inn. Nov. 10.
- **Connecticut Chapter.** Professional-social meeting. BG William J. Maddox, Jr., Director of Army Aviation, OACSFOR, guest speaker. Frederick's Restaurant. Nov. 12.
- **Alamo Chapter.** Social meeting. Main ballroom, Ft. Sam Houston Officers' Open Mess. Nov. 20.
- **Army Aviation Center Chapter.** Professional luncheon meeting. Guest speaker from Sikorsky Aircraft. Ft. Rucker Officers' Open Mess. Dec. 7.

New Chapter

AAAA members residing in Hawaii met on October 2 and activated the "Aloha Chapter of Hawaii." Some 32 members attended the chapter activation meeting at which the following slate was installed: COL Nelson A. Mahone (Pres), CW2 Robert J. Cunningham (EXVP), CPT James E. Price, Jr. (Sec), and CW3 Robert G. Donnenwirth (Trea).

Vice Presidents of the new chapter include CPT Jerry F. Anderson (Army Aff), LTC Paul G. Phillips (ARNG Aff), and LTC RO-



CANAL ZONE — Robert J. Owen, right, Asst Chief of the Panama FAA, is shown just prior to a recent professional meeting of the Latin American Chapter at which he was guest speaker. LTC James R. Hoefener (left), Chapter President, and COL Lloyd G. Huggins, Chief of Staff, U.S. Army Forces Southern Command, were on hand to greet the official.



FT. EUSTIS — LTC Harold N. McGlaun, left, guest speaker, awards a diploma and an AAAA Certificate of Achievement to CPT John F. Sheehan, honor graduate of AMOC 21-70, at ceremonies held at the U.S. Army Transportation School.

Paul G. Phillips (ARNG Aff), and LTC Robert A. Donahue (Indus Aff). The new organization replaces the former "Hawaii Chapter," activated on March 23, 1962, and deactivated due to USARV turbulence on March 7, 1967.

Convention Issue

The October 14-16 dates of the 1970 AAAA Annual Meeting precluded the publication of Annual Meeting details in the November, 1970 issue. A full convention report and appropriate Annual Meeting photos will appear in the December, 1970 issue.

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General Kinnard to Lead AAAA during 1970-1971

TAKING office at a Washington, D.C. business meeting held upon the conclusion of the Twelfth Annual Meeting of the Army Aviation Association, a new National Executive Board slate looks forward to its '70-'71 service starting with the initial business meeting to be held at Fort Eustis, Va., February 4-6, 1971.

Lieutenant General Harry W. O. Kinnard, USA (Ret.), was installed as the ninth National President of AAAA. The Vice President for Corporate Planning of McCulloch Aircraft Corporation, El Segundo, Calif., General Kinnard was joined on AAAA's National Executive Board by Major General Delk M. Oden, USA (Ret.), of Dothan, Ala., who was reelected for a second three-year term and will serve in '70-'71 as AAAA's Senior Vice President.

The 45-member governing board also reinstalled Colonel Clarence H. Ellis, Jr., of MacDill AFB, Fla. as Secretary-Treasurer.

Incumbent Board members who are completing normal three-year Board terms of office as National Vice Presidents include: Major General G. P. Seneff, Jr., Fort Hood, Tex.,

Colonel Robert R. Corey, USA (Ret.), Trumbull, Conn.; and Colonel E. Pearce Fleming, Jr., USA (Ret.), Atlanta, Ga.

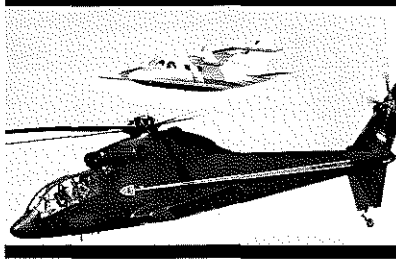
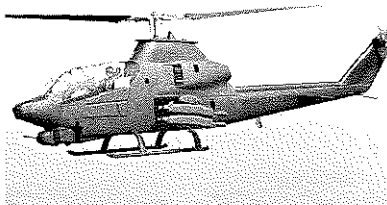
Newly-elected Vice Presidents are Brigadier General Edwin L. Powell, Jr., of Aberdeen Proving Ground, Md.; Chief Warrant Officer (W4) Robert L. Hamilton, Fort Rucker, Ala.; and Wayne R. Smith, AVSCOM, St. Louis, Mo.

Arthur H. Kesten, Executive Vice President, an appointee; Past Presidents Brigadier General Robert M. Leich, USAR, Evansville, Ind.; Bryce Wilson, Glenbrook, Nev.; Joseph E. McDonald, Jr., Darwin P. Gerard, USA (Ret.), all of Washington, D.C.; General Hamilton H. Howze, USA (Ret.), Ft. Worth, Tex.; and Colonel Richard L. Long USA (Ret.), Fairfield, Conn., along with USAREUR Regional President Colonel O. B. Butler; seventeen CONUS Chapter Presidents who serve as Chapter Members-at-Large; and approximately six to eight National Members-at-Large to be appointed by the President constitute the full executive board.



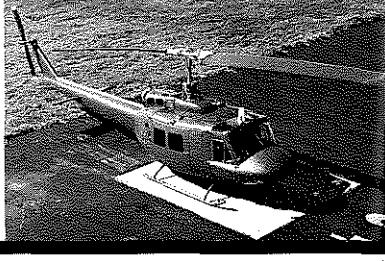
STRATFORD, CONN. — A full-scale mockup of Sikorsky Aircraft's aerial armored reconnaissance vehicle (AARV), shown above, already has been tested under fire. Both ball and armor-piercing projectiles were used. The armor plate was dented, but not penetrated. The impact of the projectiles can be seen on the lower front fuselage. (Sikorsky)

FORT WORTH, TEX. — A full scale mock-up of an anti-armor version of the Army's AH-1G HueyCobra gunship is shown for the first time. The aircraft, produced by Bell Helicopter, features an improved XM-26 sight, the XM-120 turret, and a TOW missile system. The turret houses the WECOM-developed XM-140 30mm cannon with a 500-600 round capacity. (Bell)



STRATFORD, CONN. — The Sikorsky S-67 Blackhawk starts a 5 degree dive leading to a speed of 208 knots (239 mph) during an Oct. 19 flight near the Sikorsky plant at Stratford, Conn. The pace plane, a Mitsubishi MU-2, is shown in the background. Designed primarily as an attack helicopter, the S-67 is adaptable to a wide variety of missions. (Sikorsky)

FORT WORTH, TEX. — The new Model 214 Huey Plus features a new 50-foot diameter main rotor system, swept tip rotor blades that reduce power in high speed flight, the absence of the normal stabilizer bar, and an improved drive system with a 2,000 hp transmission and 1,900 shp Lycoming T53 engine. Payoff? a 40 percent increased payload. (Bell)



DIPPACH, GERMANY — An OH-58A Kiowa Light Observation Helicopter, latest addition to the Army's flying arsenal, hovers above ground during initial actions of Exercise CERTAIN THRUST. The action took place in mid-October as USAREUR troops took part in field training associated with NATO Exercise REFORGER II. (USA photo)

Takeoffs

PCS — GENERALS	PCS — LTCS	PCS — LTCS	PCS — LTCS
BURDETT, Allen M., MG 45 Red Cloud Road Ft Rucker AL 36360 BURCH, Jonathan R., BG HHC, 1st Cavalry Division APO San Francisco 96490 NORTON, John, MG Quarters One Ft. Belvoir VA 22060 SENEFF, G.P., Jr., MG Hqs, Project MASSTER Ft Hood TX 76544 WRIGHT, John M., Jr., LTC Quarters 17 Ft Myer VA 22211	BILLMAN, Ervin L. 4322 Bloomdale San Antonio TX 78218 BINDRUP, Lavere W. 6901 Loudoun Lane Springfield VA 22152 BITTINGER, Robert C. USAMATCOMEUR APO New York 09052 BOURNE, Harold O. 1708 Burning Tree Drive Vienna VA 22180 BOYDSTON, Ariand D. 3908 Shady Hollow Lane Dallas TX 75233 BROSNAN, John F. US Forces Spt Activity APO New York 09407 BROWN, Howard E. 100 Beam Road Enterprise AL 36330 BROWN, John P. 4502 Sonata Court Fairfax VA 22030 BROWN, Sam E. 1319 Honeysuckle Drive Fairborn OH 45324 BUGENSKO, John G. Hq 3 US Army, AJAGL-SM Ft McPherson GA 30330 BURBANCK, Robert A. 12 Miller Field Staten Island NY 10306 BURNETT, Clark A. CINCPAC, Bx 15-J5134 FPO San Francisco 96610 BUSH, James K. USAF Tact Air Warfr Ctr Eglin AFB FL 32542 CALHOUN, George B. G-3 Div, Hq Berlin Bde APO New York 09742 CANTWELL, Franklin D. 866 Cascade Drive Newport News VA 23602 CHAPIN, Gordon R. Green Acres, R.R. 5 Warrensburg MO 64093 CHRISTENSEN, George F. 1816 East Calstock Street Compton CA 90220 CLARK, Paul E. USACDCSSG Ft Lee VA 23901 CONLEY, Samuel G., Jr. 99-B Schofield Circle Ft Riley KS 66442 CONSELMAN, Charles B. Quarters 8810 Ft Lewis WA 98433 DeDAVISS, Osceola 5708 Beverly Street Savannah GA 31405 DIETSCH, Richard K. 31 Logan Street Ft Rucker AL 36360	DOTSON, Larry D. 3994 Columbia Road Martinez GA 30907 DUNCAN, Jack L. 5817 Teakwood Lane Pleasure Rg Pk Ky 40258 ESTES, Billy G. USA Avn Maint Center APO New York 09028 FALLS, John R.D. 1, Box 40 Branchville NJ 07826 FAMBROUGH, John A., II 2109 Sherwood Hall Lane Alexandria VA 22306 FITCH, John B. 2403 Stirrup Lane Alexandria VA 22308 FLEMING, Hewell D. Hqs, 4 Arm'd Div Spt Cmd APO New York 09068 GIBBS, Robert M. 431 Gielo Vista Colorado Springs CO 80911 GILLMAN, Charles H. 8 Anderson Street Ft Stewart GA 31313 GRAHAM, James R. Route 1, Box 173-A Bedford TX 76021 GREGORY, Kelly G. Hqs, Tuttle Army Hospital Hunter AAF GA 31409 HEUER, Martin 1008 Deeker Drive West Bend WI 53095 HOBBS, Donald I. 1235-C Ramsel Court Pres San Fran CA 94129 HOSTLER, Howard K. 911 Stadium Way Tacoma WA 98403 HUNSUCKER, Charles L. SASC0M APO New York 09757 HURD, Robert L. 315 Pope, Apt 4 Ft Leavenworth KS 66027 HYMAN, Robert D. 2356 Oswego Aurora CO 80010 INGRAM, Thomas A. 17 Kirby Ft Leonrd Wood MO 65473 JAY, James W. 8812 Hospital Drive Ft Rucker AL 36360 JENKINS, William M., Jr. 2530 H.Wurzbach Rd., 25C San Antonio TX 78209 JENNINGS, Robert H. Route 1, Box 510-A Copperas Cove TX 76522 JOHNSON, Flavii L. 3601 Wharton Ft Worth TX 76133	JONES, Robert L. 543 Tarragon Drive Terra Linda CA 94903 JORDAN, Aldy C. 83 North Hopkins Road Aberdeen PG MD 21005 KELLY, James J. 119 Grove Park Ft Dix NJ 08640 KELLY, William D. AvnSp Fac NCARNG, Bx88 Morrisville NC 27560 KOEGLER, John A. 6408 Evans Mill Way Lithonia GA 30058 KRAMER, Leslie J. 611 Houston Manhattan KS 66502 LANDRY, Robert L. 6 Oglethorpe Avenue Ft Stewart GA 31313 LILLEY, Aaron L., Jr. 8237 Smithfield Avenue Springfield VA 22152 MANGUS, Samuel J. MEDDAL Ft Monroe VA 23351 MARETT, James D. 201 Willow Drive Enterprise AL 36330 MARTIN, John W. MACV Adv Tm 10, IVALC APO San Francisco 96215 MAY, Joseph M.F. 8468 Flagstone Drive Tampa FL 33615 McDONALD, Malcolm G. 107 3d Infantry Road Ft Leavenworth KS 66027 McFADDEN, Louis P. 66 3d Infantry Road Ft Leavenworth KS 66027 McGEE, Charles F. 377 Highland Drive Rantoul IL 61866 McMURRAY, Thomas I. 4614 Lawn Ct., Surrey Sq. Fairfax County VA 22030 MONTS, William B., Jr. USA Elm, MAAG, Box 404 APO New York 09319 MOSES, George W. 104 3d Infantry Road Ft Leavenworth KS 66027 MOUTHTHROP, Robert M. 8507 Parliament Drive Springfield VA 22151 MURRY, George S. General Delivery Ft Leavenworth KS 66027 O'DAY, Nat R. 5017 Eldorado Drive Ft Worth TX 76118 OKSA, Reino O. P.O. Box 31038 Temple Hills MO 20031
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Blow your horn!

A monthly column in which Army Aviation personnel claim individual or unit operational and logistical records . . . Payloads, speed, altitude, endurance, length of service, flight time . . . World or service records, in or out of combat . . . Submit them to **ARMY AVIATION**, 1 Crestwood Road, Westport, Conn. 06880.

Youngest Chief Warrant Officer Third Grade (CW3) in Army Aviation: CW3 Willis R. Patterson. Born February 10, 1944. Date of rank to CW3: August 13, 1969 at age 25 years, 7 months. (108)

Lowest temperature under which a CH-21C flown: —56 degrees below zero, by LTC Ralph O. Bennett while assigned to the U.S. Army Arctic Test Center, Ft. Greely, Alaska. (110).

High flight time for an Army Aviator in USARV in calendar month: 202 hours by COL Kenneth D. Mertel (then CO of the 11th Combat Aviation Group), during May, 1970. (112).

Lowest temperature under which a YUH-1D flown: —62 degrees below zero, by LTC Ralph O. Bennett while assigned to the U.S. Army Arctic Test Center, Ft. Greely, Alaska. (109).

High flight time for single Cobra airframe during one month (non-combat): 170.1 hours by AH-1G #66-15257 during August, 1967. Aircraft assigned to the U.S. Army Aviation Test Board, Ft. Rucker, Ala. (111).

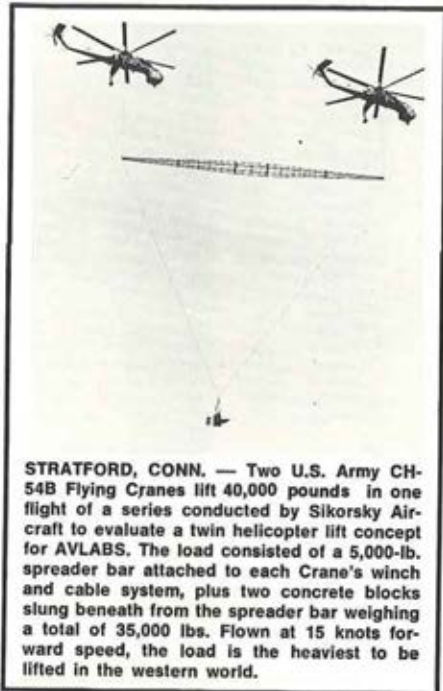
Highest total of accident-free hours for an individual Army Aviator: CWO Peter H. Crawford, 18th Utility Airplane Company, 223rd CAB, with 16,000 hours. The 39-year-old veteran has been flying for 22 years, four of those with the USAF and seven with the U.S. Army. (HAWK, June, 1970.) (101)

High flight time for an Air Cav Troop during one month: 3,895.4 hours by D Troop, 3rd Squadron, 5th Cavalry, 9th Infantry Division, during July, 1968. (Submitted by LTC Duane R. Brofer). (102)

High flight time for an Air Cav Squadron in one day: 548 hours, by 7th Squadron, 1st Air Cav, 164th CAG, on 9 May 1970. (104)

MORE THAN ONE!

The September, 1970 claim of COL J. Elmore Swenson, Hq, AMC, of being the "Only Army Aviator now on active duty who has served in combat as an aviator in three wars" brought several responses. LTC Charles V. Graft, Jr., Springfield, Va., and LTC Ralph O. Bennett of Ft. Rucker, Ala., also lay claim to having flown in combat in WW II, Korea, and Vietnam. We suspect there are others.



STRATFORD, CONN. — Two U.S. Army CH-54B Flying Cranes lift 40,000 pounds in one flight of a series conducted by Sikorsky Aircraft to evaluate a twin helicopter lift concept for AVLABS. The load consisted of a 5,000-lb. spreader bar attached to each Crane's winch and cable system, plus two concrete blocks slung beneath from the spreader bar weighing a total of 35,000 lbs. Flown at 15 knots forward speed, the load is the heaviest to be lifted in the western world.

High flight time for an Air Cav Squadron in one month: 9,719 hours, by 7th Squadron, 1st Air Cav, 164th CAG, in March, 1970. (104)

High flight time in CH-47 aircraft during one tour in USARV: 1,410 hours by CW2 William J. Murray. (107)

High flight time for a Combat Aviation Group in one day: 1,941 hours, by the 164th (Delta) Aviation Group on May 9, 1970. (104)

High flight time for a Combat Aviation Group in one month: 47,319 hours, by the 164th (Delta) Aviation Group in May, 1970. (104)

Youngest Warrant Officer to graduate from flight school: 1LT James H. Johnson, who got his wings and his WO bars the day before his 19th birthday. (114)

Most Air Medals in a single award ceremony: LT William E. Tisdale, Fort Rucker, Ala., who received his first through the 73rd Oak Leaf Cluster in one ceremony for 9,372 Huey sorties between June 21, 1968 and January 1, 1970. (115)

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WANTED! TEST PILOTS!

(Continued from Page 2)

aviator is awarded the Military Occupational Specialty (MOS) 1986 — *Experimental Test Pilot* — which is described in AR 611-101. The test pilot can expect to be assigned to the U.S. Army Aviation Systems Test Activity at Edwards AFB, Calif., a subordinate activity of U.S. Army Aviation Systems Command.

Much of the responsibility for determining the acceptability of a new aircraft or associated system lies with the engineering test pilot. Many major decisions will be based on his recommendations. He is the one who evaluates the handling qualities, performance, and aircraft systems suitability of new or modified aircraft, and who obtains quantitative data and expresses qualitative opinions that can be used by engineering personnel.

In the Army, he also has the responsibility of determining the suitability of the aircraft or system to perform the mission for which it is intended. When one considers that equipment can be expected to remain in the inventory for over 10 years, it is important that it be well suited for the mission.

The failure rate

That the challenge which the school offers is real is substantiated by the student failure rate. As of 30 June 1969, 14 of 53 Army Aviators and Civil Service employees of the Army who started the course at the Naval Test Pilot School had failed to complete the course. Since that time, two other aviators have been dropped from the course. About one-half of these failures have been due to unsatisfactory academics, and the importance of a strong academic background cannot be overemphasized.

Because of the rigorous program in both flying and academics, no one should be criticized for failing to complete the course. An applicant for test pilot school should be aware of what he is facing, however, and realize that a high degree of motivation is required in addition to a good academic and flying background. Successful completion of the course gives an aviator a strong sense of accomplishment.

One of the problems in selecting aviators

who have a high probability of completing test pilot school is, as was stated previously, there are too few applicants from whom to choose. Hopefully, this article will make more aviators aware of the test program and increase interest in the program. This increased interest should make selection more competitive and result in a better qualified aviator being selected for test pilot school.

Aviators who have the required academic background and who are interested in being a test pilot should apply for test pilot school as soon as they have the desired flight experience. It is advantageous to the individual aviator to enter the test pilot program *as soon as possible* in his career. Doing so will permit the aviator to gain experience as a working test pilot before he assumes a supervisory position. Earlier entry into the program also allows the individual to fit the school and utilization assignment into his career plan more easily.

Flight background

What about the background of the Army's test pilots at the time they started test pilot school? A survey conducted by the author tabulated the responses of 32 military test pilots. Total flying time ranged from 1,500 hours to 6,000 hours. Only 3 aviators had 1,000 hours or less in fixed wing aircraft while 21 had 1,000 hours or less in helicopters. In the author's opinion, this is significant in that the rotary wing portion of the course is more difficult.

The average flight experience of the aviators when they started test pilot school was 9.4 years of rated service, 1,925 hours in fixed wing and 1,045 hours in rotary wing aircraft. The average flight experience is well in excess of what is required or perhaps even desired for an applicant. There must be a compromise between flight experience and age and time in service in order to get the younger test pilot that is needed.

Academic background

As for academic background, 15 of the 32 test pilots who responded to the survey had graduate degree in mathematics or engineering. However, only 25 percent of the entire group felt a graduate degree should be a pre-

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Obituaries

The obituary notices of the following AAAA members were received at the National Office during October, 1970:

ATHEY, Clifford S., LTC; USAR; FA; HHB, 31st Arty Bde, Homestead AFB, Fla.; died August 27 in Homestead AFB. He was the instructor pilot of a military aircraft which crashed. His widow, Mrs. Dona B. Athey, resides at 2394 Kansas Avenue, Homestead AFB, Fla. 33030.

CRAW, Donald D., CPT; died in Vietnam when his helicopter crashed into the sea on September 26, 1970. His widow, Mrs. Connie K. Crawl, resides at 3511 Bennett, Durango, Colo. 81301.

CROUSE, Edgar F., Jr., WO1; USAR, AVN, Trp B, 7th Sqdn, 17th Cav, 17th Avn Gp; killed in action in Vietnam, July 20, 1970. His father, Edgar F. Crouse, Sr., resides at RR2, Box 293, Glen Allen, Va. 23060.

FITZSIMMONS, Patrick G., WO1; USAR, AVN; 190th Avn Co, 145th Avn Bn, 12th Avn Gp; killed in action in Vietnam, August 24, 1970. His parents, Mr. and Mrs. Gilbert G. Fitzsimmons reside at 367 Teloma Road, Ventura, Calif. 93003.

FRASCH, Robert L., WO1; USAR, AVN; 240th Avn Co, 222nd Avn Bn, 12th Avn Gp; killed in action in Vietnam, August 21, 1970. His parents, Mr. and Mrs. Eldon D. Frasch, reside at 1501 N. Scott Avenue, Belton, Missouri 64012.

HEADY, Kurt C., 2LT; USAR, INF; Air Cav Trp, 3d ACR, Ft. Lewis, Wash.; died September 4, 1970, from injuries received in the crash of a military aircraft near North Bend, Wash. His parents, Mr. and Mrs. Lloyd W. Heady, reside at Route 4, Box 616, Salem, Oregon 97302.

KERSEY, William R., Jr., CW2; USAR, AVN; Trp B, 1st Sqdn, 9th Cav, 1st Cav Div (Amlb); died in Vietnam on September 1, 1970, when the aircraft in which he was riding as a passenger crashed; his parents, Mr. and Mrs. William R. Kersey, Sr., reside at 110 N. Cove Boulevard, Panama City, Fla. 32401.

KOWALSKI, Leonard J., Jr., CW2; USAR, AVN; Co B, 228th Avn Bn, 11th Avn Gp; died September 12, 1970, in Vietnam as a result of injuries received in an aviation accident; his widow, Mrs. Betty L. Kowalski, resides at 415 Newton Street, Middleton, Michigan 48856.

LANG, Charles V., MAJ, RA; INF; Co B, 288th Avn Bn, 11th Avn Gp; died September 12, 1970, in Vietnam as a result of an aviation accident; his widow, Mrs. Patricia E. Lang, resides at 865 Wilmont Lane, Newport News, Va. 23602.

MINEAR, Mark W., WO1; USAR, AVN; Trp C, 2d Sqdn, 17th Cav, 101st Abn Div (Amlb); died in Vietnam on August 29, 1970, as a result of wounds received in action. His widow, Mrs. Jo Ann Minear, resides at 1715 Sandy Court, Merritt Island, Florida 32952.

NOLL, David R., WO1; USAR, AVN; Trp B, 1st Sqdn, 9th Cav, 1st Cav Div; died September 1, 1970, in Vietnam, as a result of an aircraft accident; his widow, Mrs. Debbie L. Noll, resides at Route #1, Allensville, Kentucky 42204.

PETTY, Ernest D., WO1; USAR, AVN; 176th Avn Co, 14th Avn Bn, 16th Avn Gp; died September 9, 1970, in Vietnam, as a result of an aircraft accident; his widow, Mrs. Janet M. Petty, resides at 1206 Blackstone Avenue, St. Louis, Missouri 63112.

RAWLINSON, Terrell L., CW2; USAR, AVN; Btry A, 2d Bn, 20th Arty, 1st Cav Div (Amlb); died in Vietnam on August 25, 1970, in an aircraft accident; his parents, Mr. and Mrs. Robert E. Rawlinson, reside at Rt 3, Box 17, Big Spring, Tex. 77373.

WHEAT, Thomas W., Jr., LTC; USAR, FA; 44th Avn Det, Ent AFB, Colo.; died September 14 in Colorado while pilot of a military aircraft which crashed; his widow, Mrs. Carolyn B. Wheat, resides at 1304 Verde Drive, Colorado Springs, Colorado 80910.

WANTED! TEST PILOTS!

(Continued from Page 33)

requisite for the course. One must realize that the grades an individual has received in the required courses are more important in assuring course completion than whether or not he has a graduate degree.

You may still have questions about the test pilot program after reading the two publications that were mentioned previously. If so, contact the Army Liaison Officer at the Naval Test Pilot School (AUTOVON 961-4589) or your assignment officer at your career branch.

If you feel you have the necessary qualifications and are interested in being a test pilot, investigate the program more thoroughly. As soon as you are sure that you want to enter the flight testing program, apply! *You are needed!*

ABOUT THE AUTHOR

Major Roger W. Waddell, College Park, Ga., is a Senior Army Aviator and a 1970 graduate of the Air University's Command & Staff College at Maxwell AFB, Fla. He prepared the "Wanted!" article while a student at the Air University.

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"Firsts!"

Have you personally — or your crew, unit, agency, or firm — ever participated in establishing a "first" in Army Aviation? . . . If so, get it on the record! . . . Submit it for publication to **ARMY AVIATION MAGAZINE**, 1 Crestwood Road, Westport, Conn. 06880. We'll publish your "Firsts!" in the order in which they are submitted.

First Warrant Officer Fixed Wing Aviator Course class to graduate USAAVNS: WOFWAC 63-1 consisting of 63 U.S. and 3 Allied students who initiated training on 3 April 1963 and graduated on 19 December 1963. Class leader was Herman R. Atkinson; the Honor Graduate was William J. Chapman. (Submitted by CPT Pharies B. Petty). (125)

First (and probably only) Army Aviator to be shot down 50 miles behind his own lines: LTC Cloyd V. Taylor, Ret., who while flying in an Army L-4 during WW II was shot down by an ME 109 with French insignia and markings. (126)

First Army Aviator to serve as a member of the Directing Staff at the Australian Staff College: LTC Lawrence J. Stone, January, 1968. (127)

First Army Aviator and AAAA member to have three AAAA National Scholarship Winners: LTC Charles V. Graft, Jr., father of Joel ('63 winner), Mary Lynn ('68 winner), and Thomas O. ('70 winner). (128)

First Use of a UH-1D (with —11 engines) to rescue a mountain climber above the 15,000-foot level: March 8-9, 1967, with rescue of seven climbers on Mt. McKinley by UH-1D and UH-1B (with —11 engines) at altitudes up to 17,000 feet. Aircraft assigned to the U.S. Army Arctic Test Center were flown by LTC Ralph O. Bennett and LTC Roy Miller with MAJ A. Toepel and WO Watkins, copilots. (130)

First Army Aviator to fly a Cambodian helicopter in Vietnam: LTC Richard A. Humes, USA (Ret.), on December 20, 1960, while conducting instruction for the Cambodian Air Force. (131)

First Army Aviator to fly a Russian helicopter in Cambodia: LTC Richard A. Humes, USA (Ret.), who flew a MIL-5 on February 20, 1961, while conducting helicopter instruction for the Cambodian Air Force. (132)

First Army Aviator to fly the Navy's new KA-6D aerial tanker aircraft: CW3 Kenneth R. Franz, assigned to the Grumman Plant Activity, Stuart, Ga., where the Army's OV-1 Mohawk and the Navy's KA-6D are made and modified. (133)

First delivery of an OH-58A LOH airframe to the Bell Helicopter Company by the Beech Aircraft Corporation under a subcontract: November 21, 1968 with the 500th airframe delivered on July 31, 1970. (136)

That's it for this month . . . Our "Firsts!" bin is completely empty . . . Pick up your pen!

You've got it all wrong . . .

Dear Editor:

We in LANDSOUTHEAST, Turkey, take exception to a "First" claimed in the September, '70 issue of **ARMY AVIATION**. We refer to the claim of the "First U-21A Transatlantic Flight." (129).

The U-21A #R18116 piloted by LTC James T. Bridges of USAAVNS and LTC Eugene Gardner of LANDSOUTHEAST departed the Beech Aircraft factory at Wichita, Kan., on 19 February 1970, four months prior to the claim we are contesting. This aircraft was the "First delivery of a transatlantic U-21A" and the "First operational U-21A in the European Theater."

Stops were made enroute at Argentina, Lajes, and Torrajon, before landing at Cigli AB, Izmir, Turkey.

Joseph P. Duffy
CW4, USA
Asst OpnsO, LSE

Dear Editor:

This is in the nature of "umbrage" concerning the recent rash of "firsts" involving Army Aviation incursions into Cambodian territory. Apparently the authors are a group of junior aviators who do not realize that the Army had an active flight detachment based in Phnom Penh, Cambodia, from sometime in 1955-56 until diplomatic relations were severed in 1963.

The detachment consisted of two pilots and three U.S. crew chiefs, with one U-8 and two U-6 aircraft. We made frequent flights to Saigon, Bangkok, Vientiane, and all parts of Cambodia. I do not know who can claim the "First" for an Army aviation flight into Cambodia, but both LTC Jerry Orr and myself made a bunch during 1960-1961, when we were stationed in Phnom Penh. (130).

I feel that any claims about "Firsts" in Cambodia properly belong to the founding fathers of the MAAG Cambodia flight detachment, rather than to those who later reentered the territory of a former ally.

Richard A. Humes
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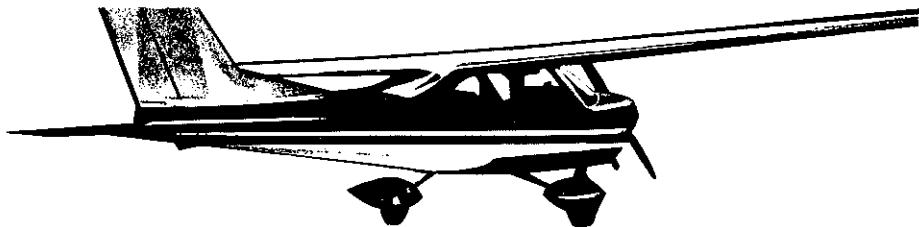
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