

Army Aviation

January, 1974

Helioplane!

... see back cover



AVCO

LYCOMING DIVISION

STRATFORD, CONNECTICUT 06497

ARMY AVIATION

VOLUME 23 JANUARY 7, 1974 NUMBER 1

CONTENTS

NEW DIRECTION:

The Advance Scout — A New Hard Look!

By Major General Donn A. Starry,
Commander, U.S. Army Armor School 4

DIRECTORATE:

We face two major problems!

By Brigadier General James H. Merryman,
Director of Army Aviation, OACSFOR, DA 8

OPINION:

The Helicopter Keeps Trying to Get Us Out of Uniform!

By Morris G. Rawlings 23

AAAA:

1973 AAAA National Convention Report

The President's Annual Report 33
Fiscal Report by the Secretary-Treasurer 34
New Regional Presidents Appointed 34
Regional and Chapter Activities 39
Photo Story, 1973 Convention 37
National Awards to Chapter Activities 43

SCHOLARSHIP FOUNDATION:

AAAA offers \$4,000 in scholarship aid
to the sons and daughters of members 41

THE PERSONAL SIDE:

Awards, Births, Degrees, Distinguished
Graduates, Marriages, Obituaries, Ratings 44

ADVERTISERS:

Avco Lycoming Division 1
Bell Helicopter Company 3
Bendix Corp. Avionics Division 7
Embry-Riddle Aeronautical University 19
Fenn Manufacturing Company 15
Hughes Helicopters 11

USAREUR QUAD-A MEMBERS TO GATHER AT GARMISCH '74

Some 300 Army Aviation personnel and their families are expected to gather at the Fourteenth Annual USAREUR AAAA Regional Conference to be held 18-23 February at the U.S. Army Recreation Center in Garmisch, Germany.

Contact for military attendees is the 173rd Aviation Company, Attn: CPT Jerry V. McGlothlin, APO New York 09165.

1973 CONVENTION PHOTOGRAPHS

All AAAA Convention photos appearing in the November-December, 1973 and January, 1974 issues were taken by Miss Rosemarie Vernell, Creative Services International, 1748 "M" St., N.W., Washington, D.C. 20036.

After Action Report on Record Overwater Chinook Flight

THIS letter provides pertinent information concerning "Operation Longhaul" from Campbell Army Airfield to Puerto Rico and return. On 22 September, a flight consisting of four CH-47 Chinooks of the 159th Aviation Battalion departed Ft. Campbell, enroute to Puerto Rico. The dates, times, and places of departure and arrival follow:

DEP CAAF 220700 Sep; ARR Homestead AFB 221800 Sep; DEP Homestead AFB 260700 Sep; ARR San Juan 261500 Sep; DEP San Juan 281030 Sep; ARR Ramey AFB, P.R. 281115 Sep; DEP Ramey AFB, P.R. 301000 Sep; ARR Homestead AFB 301700 Sep; DEP Homestead AFB 011100 Oct; ARR Ft. Rucker 011400 Oct; DEP Ft. Rucker 021030 Oct; ARR Ft. Campbell 021400 Oct.

The flight was flown a total distance of 3,527 nautical miles, of which 1,827 miles was accomplished over water. A flight of this nature could not have been made without the fabrication of an internal fuel system. A system was devised utilizing three 600 gallon fuel tanks to double the fuel load of the aircraft. Prior to the adoption of the internal fuel system, a Chinook could carry 1,120 gallons of fuel. After the internal fuel system had been installed, an additional 2,092 gallons was added to the aircraft fuel system.

During the flight, minor maintenance problems were encountered. An engine transmission and a generator for one of the aircraft had to be transported to Puerto Rico by commercial air freight. The maintenance required to repair the aircraft was routine and presented no significant problem. Transportation of the repair parts was made within 24 hours and there were no problems in this area. The return trip was made without difficulty to Fort Campbell, KY.

—CPT GARY L. METER

ARMY AVIATION is published in January through May, July, August, October, and December by Army Aviation Publications, Inc., with Editorial and Business Offices at 1 Crestwood Road, Westport CT 06880. Phone (203) 227-8265. Subscription rates for non-AAAA members: 1 year \$4.50, 2 years \$8.00 to CONUS and APO addresses only; add \$7.50 per year for all other addresses. The views and opinions expressed in the publication are not necessarily those of the Department of the Army or the staff of the publication. Publisher, Arthur H. Kesten; Managing Editor, Dorothy Kesten; Associate Editor, Chester Jezierski; AAAA Affairs, Dorothy DeVack; Fulfillment, Beryl Beaumont. Advertising information is available from the Business Office or from Jobson, Jordan, Harrison & Schulz, 1901 W. 8th Street, Los Angeles CA 90057. Phone (213) 483-8530, or JH&S, 57 Post Street, San Francisco CA 94104. Phone (415) 392-6794. Second class postage paid at Westport CT.



Bell's YAH-63 puts the pilot up front.



Here's what's in it for the Army:

Nap-of-the earth missions demand maximum pilot visibility, day or night. That's why Bell's YAH-63 puts him up front. For better aircraft control. For close-in defense of the aircraft with direct sighting and firing.

Bell's YAH-63 gives the Army the attack helicopter it wants: a sound balance of performance, firepower and survivability... within design-to-cost goals.

peacekeepers
the world over
depend on **Bell**
HELICOPTER



THE ADVANCE SCOUT— A NEW HARD LOOK!

BY MAJOR GENERAL DONN A. STARRY
Commander, U.S. Army Armor Center, Ft. Knox, Ky.

I have good news and bad . . . The good news is I'm going to talk about a new airplane; the bad news is that it's going to be talked about by a non-aviator. Since you've just heard from three distinguished (AMC) Project Managers and since this (ASH) project has no manager, I guess that it's appropriate for the Godfather of Armor to speak about it in being the equipment proponent.

I think I ought to say to you also that contrary to the fears of many people the assignment of pronopency for aviation assets to Armor, both the *Attack Helicopter* and the *Scout Helicopter*, has, we believe at least on our side, drawn us closer to the aviation community and has made us a little bit more dependent upon it than we might like to be sometimes. In any event, it's suggested new dimensions to be explored in pursuing Armor's and cavalry's traditional battlefield roles.

Unlearning bad habits

For example, after some extensive testing, we've learned that the integration of air cavalry and attack helicopter units into the combined arms team basically requires no significant revision in the proven principles of doctrine. What is required, however, and I'd like to emphasize this, is that we unlearn some bad habits acquired during almost ten years of involvement in Vietnam.

The present demands some fresh thinking — the future demands a *New Direction*. To accomplish this change we have already begun trying to infuse, at least,

in our Armor leaders the idea that they now have an additional, highly responsive and flexible maneuver element organic to the branch, one that is ready, willing and able to bear a lion's share of the battle.

One of our problems, in my opinion, is that we've treated these things like airplanes too long. They're not (airplanes), in my judgment — at least those that fly nap of the earth live in the ground battle environment. It's true that they don't always sit on the ground to do their job, but they live in the ground battle environment, and that's the philosophy with which we look at both the *Attack Helicopter* and the *Scout Helicopter*.

We at Knox are currently taking a hard look at the cavalry side of Armor for we believe there are some basic questions to be re-asked and some basic functions to be re-defined. There is some evidence, we believe, that the so-called "fighting to gain information" part of the cavalry function may have overshadowed the development of materiel, tactics, and techniques designed to acquire information by other means.

If this is so and you follow this logic, then we must ask ourselves if the new advanced reconnaissance helicopter should be armed to fight for information, or should depend primarily on sensors, visioptics and the cunning of its crew. The answer to this question is significant for future equipment design.

So far, I suggest that our track record in developing scout aircraft is not good. Quite frankly, I believe that we have to stop developing equipment which, because of its limitations or shortcomings, requires the soldier to alter his mission,

Presentation made by MG Starry at the 1973
AAAA National Convention in Washington, D.C.

The Chinook Comes To Canada



Boeing's CH-47C Chinook will now serve Canada with more capabilities than ever before. Canadians will operate Chinooks at their full capability by utilizing:

- 44 troops—seated.
- 26,000 lb payload on external cargo hook.
- 4500 SHP single engine stay-up ability at high gross weights.
- Expanded IFR, navigation and operational flight ranges.
- Personnel rescue hoist—externally mounted.
- Water operations with high payloads.

BOEING HELICOPTERS
BOEING VERTOL COMPANY

purpose, and perhaps, in the final analysis, his overall worth on the battlefield.

Equip the man for the mission! We must *not* continue to alter the mission to fit equipment that was designed for other purposes. We've been asked several times at Ft. Knox in the last few years to prepare documents to bring about product improvement of the current LOH fleet. Normally, by the time these directives reach us as the user, so many people have hung their favorite projects on these poor airframes that little or no space, weight, power, or money are left to add anything that really improves the ability of the bird to accomplish its primary mission — that of collecting information.

I simply suggest that we return to some fundamentals. *What is the primary reason for building the machine? What role will it fill in the combat vehicle family? What devices will aid it in accomplishing these tasks? Lastly, what can we add to make it more survivable?*

Please note that I have placed survivability after mission. The instinct to live is in us all but if we allow this instinct to drive system development we may make our aircraft completely crashworthy but we just won't be able to afford what's really required to perform the basic mission, or, on the other hand, the bird will be so large or so heavy that it won't be able to perform as required.

INTRODUCTORY REMARKS

We've got to have a scout helicopter that can run with the guns. By that we mean a light, agile aircraft that can move out, pick up targets, and work them over to the *Advanced Attack Helicopter*. This is an aircraft that'll have much better target acquisition capabilities than our current *Light Observation Helicopters*, and we're calling this aircraft the *Advance Scout Helicopter (ASH)* that right now is a concept solidifying into a rock.

The paper will go to the Chief of Staff this week in hopes that he'll buy the rock and we'll get underway with the task force leading to a proposal. The *Scout Helicopter*, just as the *Advanced Attack Helicopter*, is in the equipment proponentcy of the Armor Center at Fort Knox, Ky. On this basis we would like to hear now on the ASH from the Commandant of the Armor Center, Major General Donn Starry...

—MG William J. Maddox, Jr.



Besides, I would submit to you that if we are flying nap-of-the-earth like we all claim we are but few of us really are, then what is required to survive a crash at five, ten, or 30 feet . . . at five, ten, or 30 knots?

Now, what has all of this got to do with the development of an advanced reconnaissance helicopter? I suggest it has a great deal. The Army has an acute need for this aircraft but only if the aircraft we design can do its job. It has to be designed from the beginning to perform as a vehicle whose sole purpose is the collection of information. It has to be compatible with the rest of the combat vehicle family, especially with the *Advanced Attack Helicopter*. For if we eventually field an *Attack Helicopter* that outperforms its reconnaissance counterpart we are no further ahead than we are today.

The AH-1Q, for example, which we're testing at Knox right now can see and shoot — right now! — further than his little friend, his reconnaissance eyes and ears. The whole concept is in jeopardy if both scout and attack birds have to expose themselves to hostile fire for any length of time while we're trying to hand off the target using the old "*Three fingers to the left of the dead oak tree*" technique which is the current state of the art, a state which I might remind you is vulnerable to smoke, haze, the confusion of the English language, and terrain.

The ranges at which we need to see and to shoot today dictate a requirement for complete system compatibility. Reconnaissance and attack helicopters should be designed as a system family.

(Continued on Page 46)

Low-cost Bendix VHF Com-Nav goes military.



The ultra-reliable Bendix com and nav is available now for military use. Already flying in OH-6, OH-58 and UH-1 Army National Guard helicopters and U.S. Navy T-34 aircraft, these super-rugged avionics units first earned an enviable reputation aboard hundreds of business aircraft. Now they've passed their military enlistment test with flying colors.

Military nomenclature for the com transceiver is AN/ARC-165. AN/ARN-116 is the designation for the VOR-LOC navigation receiver and

indicator. Two good numbers to remember.

And just how reliable is Bendix com and nav. There's actually a difference you can feel. Strong, positive tuning action, thanks to die-cast aluminum housings and machined drive gears. Electronics is top-notch, too.

Why not take advantage of this fine performance for your panel-mounted VHF com and nav requirements. Write or call today. The Bendix Corporation, P.O. Box 9414, Fort Lauderdale, Florida 33310. (305) 776-4100, ext. 372.

AVIONICS YOU CAN DEPEND ON.





FOLLOWING the festivities heralding in a New Year, many of us bank our hopes for future personal improvement or good fortune in resolutions upon which we place priorities and ordered significance.

In many instances the passage of time erodes our resolve and we find ourselves wallowing in the same murk from which we so firmly vowed we would quickly emerge. As 1973 passed into 1974, I saw two major challenges confronting Army Aviation; overcoming the energy crisis and integration of the nap-of-the-earth concept into all parts of the aviation community.

Unlike those personal resolutions to which we aspire — but sooner or later let fall by the wayside — those goals which are set before us as Army Aviators cannot be waived in favor of convenience or personal biases. To do so would provide a tragic disservice to our Army and to the troops on the ground who count on our continuous and effective support.

One of the facts of life with which we all must live in 1974 and, apparently, for some years to come, will be the energy crisis. This will result in the institution of programs to increase control of fuel flow and the use of all petroleum base products.

We face a lean energy year ahead, however we must retain a viable flying hour program. To achieve and maintain the high standards essential for the performance of aviation duties, we should adhere to the combat readiness flying program as we currently know it. In so far as possible requirements should not be altered or we face the very real possibility of a loss of overall combat readiness.

In line with this philosophy we recently dispatched two messages world-wide pertaining to the energy crunch and its effect on commanders and units in the field. The first pointed to the fact that because of varying requirements between commands, the judicious management of aviation assets required to maximize the benefits from each gallon of aviation fuel consumed must remain the responsibility of the commander in the field. It was pointed out that the requirement to maintain a force of combat ready aviators dictated that the use of waiver authority should be the last resort in attempting to reduce fuel consumption.

We cited a number of fuel conservation measures already instituted by some com-

**By Brigadier General
JAMES H. MERRYMAN
Director of Army Aviation,
OCSFOR, D/A**

We Face Two Major Problems

mands which I'd like to reiterate at this time for the benefit of all:

- Reduce transition training to the minimum required to meet operational requirements.

- Limit flight demonstrations to those sanctioned by Department of the Army and consistent with public relations objectives.

- Insure that all cockpit seats are occupied on each flight.

- Maximize the accomplishment of combat readiness flying requirements while performing operational or service missions.

- Integrate flying of non-aviation duty MOS aviators into the accomplishment of operational and service missions to the maximum extent possible.

- Substitute low fuel consumption aircraft for high whenever mission requirements will permit.

- Use alternate means of transportation, i.e., commercial air, ground vehicles, etc., whenever possible.

- Minimize turn-around times during airmobile training by using most direct routing and the closest training areas.

The second message, sent 16 November, addressed the basic flying skill requirements of individual aviators. Specifically we pointed out that the basic flying skills of aviators and the combat

readiness of units must be maintained. To accomplish this, night flying, instrument flying, and tactical flight must be accomplished. Flight examinations and maintenance of instrument qualification will continue to be mandatory requirements. In so far as possible flying requirements should be conducted during operational missions whenever possible.

As you are aware combat readiness flying requirements for aviators required to fly 80 hours or more annually are covered in Table 2-2, AR 95-1. Combat Readiness Flight requirements for those aviators whose annual flying time has been reduced to 48 hours has been established as follows:

	SEMI-ANNUAL	ANNUAL
TOTAL HOURS	24	48
NIGHT FLYING	5	10
INSTRUMENT	7	20
TACTICAL	5	10

I am hopeful that we will be able to continue with 80 hours as annual minimum flight requirement for most aviators. However, if you have had the number of hours reduced that you can fly, the new minimum should assist you in staying combat ready. Of course, the key to success in all this is in your cooperation so I urge each of you to make the most of every hour in the air.



Brigadier General James H. Merryman, Director of Army Aviation, presents Master Aviator Wings to CW4 Bob Hamilton at a recent Pentagon ceremony.

Nap-of-the-earth

The Directorate is receiving some requests that address the possibility of an exemption from the requirement to train aviators for nap-of-the-earth (NOE) flight. It would appear simple to evaluate the current operational needs of a specific unit and command and decide that, yes, an aviator flying a CH-47 or a CH-54, within the scope of his unit's mission, will never be required to fly NOE. However, I have serious reservations about accepting such a philosophy, and want to discuss some applicable points with you.

The recent Mideast war clearly announced the arrival of a new spectrum of Soviet weapons particularly challenging to aviation operations. Bluntly speaking, even the simplest weapons employment evaluation suggests that those lessons that need to be learned, must be learned quickly and applied as soon as possible to our own technology and tactical operational techniques. The most obvious lesson learned is that the most significant current and future threat will be the electronic acquisition and tracking of airborne targets, with their subsequent and rapid destruction by missiles or automatic weapons.

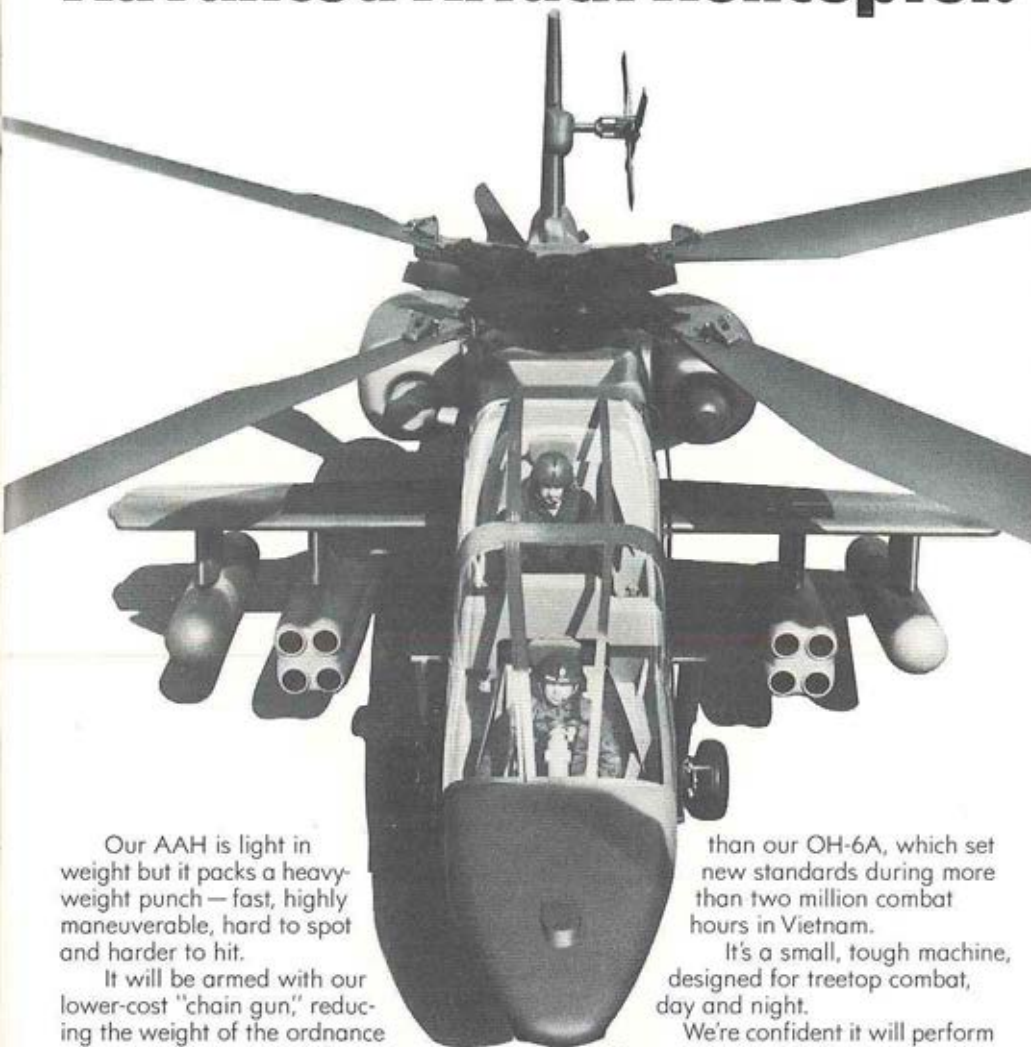
Anyone who believes that low level tactical flight will be all that is required within the airspace surrounding mobile modern surface-to-air missiles had better think again. The penetration of such airspace will clearly depend on our own electronic counter-measure capability and our ability to evade target acquisition radar through the employment of NOE. In most instances

I suggest that the mission will require both. An aircraft at 100, 200 or 500 feet in a mid-intensity environment working against a high intensity air defense threat will have little hope for survival. In this light, I trust that you will understand when DA says "no" to a request for exception. Rather than requesting an exception to the requirement I strongly urge that commanders seek ways to comply with NOE training requirements. However, I trust that you can see that the importance of the program dictates that we must succeed.

Mid-intensity from a systems standpoint

While we speak of mid-intensity, let's address aircraft systems. We are far past the self-sealing fuel tank, "chicken plate" and ballistic helmet era. In the near future we will have ballistically tough rotor

We're at work on the Army's Advanced Attack Helicopter.



Our AAH is light in weight but it packs a heavy-weight punch — fast, highly maneuverable, hard to spot and harder to hit.

It will be armed with our lower-cost "chain gun," reducing the weight of the ordnance system 280 pounds and the drag by 70 percent (we're the only company in the world that manufactures both guns and helicopters).

It will give its crew even greater safety

than our OH-6A, which set new standards during more than two million combat hours in Vietnam.

It's a small, tough machine, designed for treetop combat, day and night.

We're confident it will perform the Army's attack helicopter mission better. We know it will cost the Army less.

**Hughes Helicopters
& Ordnance Systems**

blades, flight controls and other critical components. Good progress is being made in the reduction of electro-magnetic and optical signatures such as the tell-tale sun and rotor blade reflections. Our AAH and UTTAS development programs devote serious and careful consideration to enhancing survivability against all known and assumed threats.

To get it all together, TRADOC, the Aviation Center and School, and the AMC Product Manager for Aircraft Survivability Equipment (ASE) are writing a *Required Operational Capabilities (ROC)* document for survivability equipment.

Using a systems approach, this ROC will identify full ASE capabilities required by development aircraft and recommend an affordable ASE program for our current fleet. It is important that the Army have a viable, coordinated materiel development program that is going to make us even more effective in the future.

In the past, we have perhaps relied too heavily on *Quick Reaction Capabilities (QRCs)* to develop the field ASE in response to a threat as it appeared. Though our track record in Vietnam, for example, was good, we cannot relax. It takes materiel as well as tactics to win.

Conference on aircrew performance

The Army Research Institute sponsored a three-day symposium at Fort Rucker 27-29 November, addressing the behavioral aspects of aircrew performance in helicopter flight. Hosted by Major General William J. Maddox, Jr., the conference included approximately 160 members of the civilian, as well as military, aviation community, to include interested participants from Great Britain, Canada, and Australia.

The purpose of the conference was twofold. It was the goal of Brigadier General Charles Daniel and his Army Research Institute to inform military and civilian personnel of the behavioral research needs of the Army's present and future aviation programs. It was also his intent to develop and recommend to the Army an integrated program of behavioral research directed at solving aircrew performance problems.

Perhaps the most significant outcome of the conference was less obvious than the originally outlined goals. Yet, it was in fact, one which may well affect our program for years to come. The conference, the brainchild of Bill Maddox and Charlie Daniel, created the first opportunity in many years for a meeting of the minds between the users and developers of Army aircraft and systems.

I must add, in view of the rapidly developing considerations surrounding mid-intensity warfare, the conference was not only of benefit but also essential to the continued progressive development of Army Aviation. I shall keep you advised of the tangible results of the proceedings as they surface.

UPDATE news on the T-700 engine

General Electric's Aircraft Engine Group has revealed further details about its T-700 turboshaft engine currently under development for our UTTAS (*Utility Tactical Transport Aircraft System*) and AAH (*Advanced Attack Helicopter*) competitive prototype helicopters.

Specific performance details include an intermediate rating of 1,536 shaft horsepower (at sea level static 50°F) with a specific fuel consumption of .469. These fuel consumption characteristics of the T-700 are about 25% better than current operational engines in its class.

According to Mr. W. J. Crawford, GE's T-700 Department General Manager, "... the T-700 has already accumulated more than 1,000 test hours on four prototype units since testing began ahead of schedule in February of this year. All testing has been conducted with the new totally integral sand dust separator which provides an engine capability to operate in severe environments with high reliability and reduced maintenance burden."

The mechanical operation of the T-700 has been excellent with 100% of contract required horsepower achieved. The development program continues on schedule and within cost requirements.

As you may know, the T-700 was designed specifically for Army Aviation, offering high reliability, increased survivability, low maintenance, and reduced

cost of ownership. An example of its significant maintenance improvement is its modular design. (Four key modules are replaceable in the field with only ten common tools found in an Army standard tool box.)

As the GE spokesman pointed out, "Modular maintenance capability has already been exploited on a regular basis during T-700 development at our Lynn, Massachusetts facility. Module exchanges have been accomplished in GE test cells without engine removal thus permitting great flexibility in the usage of test hardware and significant savings in time and cost."

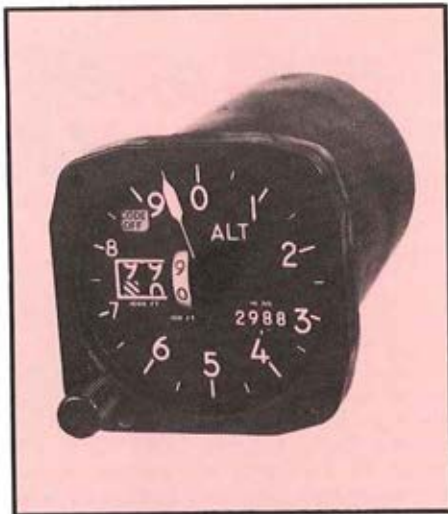
The T-700 GE engine has been chosen to power all Army UTTAS and AAH candidate aircraft. Its development program calls for 2,500 factory test hours by September 1974, when completion of the Preliminary Flight Rating Test (PFRT) is scheduled. It is expected to reach 7,000 test hours by March 1976, the scheduled date for Model Qualification Test (MQT) completion.

Twin T-700s will power UTTAS prototype helicopters currently under competitive development by the Boeing Vertol Company and the Sikorsky Aircraft Division of United Aircraft. The same engines will also power AAH prototype helicopters under competitive development by Bell Helicopter Company and Hughes Helicopters. Development of the T-700 engine is being conducted under contract to US Army Aviation Systems Command (AVSCOM).

Toward increased safety

During the past 20 years, radar has been a primary means for separating air traffic. As you know, any sizable target in the sky will reflect energy beamed into space during the transmitter's antenna sweep. This reflection is shown on the radarscope as a blip of light.

With a grid superimposed on the scope, targets can be located horizontally from the radar station and identified precisely with the assistance of radio communications between pilot and controller. When air traffic is heavy, however, and consists of a mixture of aircraft with many different



speeds and degrees of sophistication, safe separation becomes a difficult chore for both pilot and controller.

A forward looking solution to the problem is the Air Traffic Control Radar Beacon System, composed of automatic altitude reporting equipment in the aircraft and the new automatic radar tracking systems installed on the ground. With the system an aircraft can be tracked automatically on radar from the moment it enters a controller's sector. On ground displays the aircraft's identification number will appear alongside its respective position symbol together with its pressure altitude.

This will enable air traffic controllers to tell at a glance the relative distance of one aircraft from another not only with regard to azimuth, but also now with regard to altitude as well. Aircraft at altitudes with which the controller is not concerned can be removed selectively from the scope, allowing him to concentrate on traffic for which he is responsible.

The airborne component of the system is the AIMS AAU-32/A altimeter. Installation of this equipment in Army aircraft is expected to begin next month. The AAU-32/A altimeter is a self-contained, counterdrawn-pointer unit which consists of a precision aneroid altimeter combined with an altitude encoder.

The display indicates pressure altitude information which the encoder transmits and altitude is displayed on the altimeter by a 10,000 foot counter, a 1,000 foot counter, and a 100 foot drum. A single pointer indicates hundreds of feet on a circular scale with 50 foot center markings. Below an altitude of 10,000 feet a diagonal warning symbol will appear on the 10,000 foot counter.

A barometric pressure setting knob is provided to adjust the desired altimeter setting in inches of mercury (Hg). A DC powered vibrator operates inside the altimeter whenever aircraft power is on. If power to the altitude encoder is lost, a warning flag placarded *CODE OFF* will appear in the upper left portion of the instrument face indicating that the altitude encoder is inoperative and that the system is not reporting altitude to ground station.

New FAA regulations will progressively establish the need not only for transponders but also for automatic altitude reporting equipment in certain designated airspace, particularly in such high density airspace where the equipment will benefit airspace users, expedite the flow of traffic, and improve overall system safety and efficiency.

Only aircraft equipped with an operable radar beacon transponder having a Mode 3/A 4096 code capability and a Mode C capability for transmitting pressure altitude information will be permitted to operate within Group I Terminal Control Areas after 1 July 1974. The second phase will be implemented when Group II terminals are added on 1 January 1975.

Further refinements of the Air Traffic Control Radar Beacon system can be expected in the future. It is our responsibility to stay abreast of these changes and fully support all such programs which enhance efficiency and safety for the users of our nation's airspace.

Fort Wolters' last class

The last class in residence at Fort Wolters completed primary helicopter training on 13 November 1973. The class graduated on 16 November and its members proceeded to Fort Rucker to com-

plete their training. This marked the end of a remarkable era in Army Aviation.

From 1 July 1956 to 16 November 1973, 41,209 students received primary helicopter training at the Texas training base. All who participated in the massive program throughout the many years may take justifiable pride in their efforts. To commanders, to instructors, to students, we in the Aviation program owe a debt of deep and solemn gratitude. Well done!

Aviators vs trees: Who's winning?

A closing comment I wish to make deals once more with aviation safety. October and November were bad months once again for aviators in their age-old confrontation with trees. It was during confined area operations, NOE flight, and basic helicopter hovering that most incidents and accidents of this period occurred. I wonder, having studied the correlated *Army Aircraft Crash Facts Message Reports*, if closer attention need be given to ground guidance, particularly while in the hover mode.

Two November accidents, one minor and one major, were particularly frustrating to me. During a UH-1H flight overseas, a tail rotor reportedly struck a tree during a clearing turn while on a day service mission. Fortunately, no injuries were sustained, but with only minor damage to tail rotor blades, tail rotor gear box, and tail boom damage, the estimated cost of repairs was still \$7,289.00.

A second accident, major in nature, was reportedly caused by an aircraft hovering rearward into two other parked ships. Minor injuries were sustained by the copilot and one passenger. Potentially, however, the accident could have been tragic since tail rotor and main rotor separation did occur. This accident happened at night.

The point of both is that professionalism in aviation encompasses all aspects of flight, whether one considers flight planning, en route work, or, as in the cases above, clearing for departure or parking an aircraft. *HEADS UP* flying takes place as much when three feet off the ground as it does at airway altitude. □

Boeing/Vertol selects Fenn to produce Pitch Housings for the HLH

It takes a lot of very special know-how and very special machinery to make a Pitch Housing Assembly for the Boeing/Vertol HLH in the Army's HLH-ATC program. But Fenn has that special know-how, facilities and craftsmen experienced in machining special alloys to aircraft quality standards.

For years, Fenn has been the world's largest producer of helicopter rotor components. Since 1964, Fenn has manufactured the main rotor components for Boeing's CH-47 Chinook. Fenn is proud to have a part in the great HLH program. Aerospace Products Division, The Fenn Manufacturing Company, Newington, Connecticut 06111. An Amtel Company.

FENN




The Pitch Housing Assembly starts with this 2400 lb. titanium hand forging.



600 operations later the rough forging has been transformed into this complicated precision machined Pitch Housing Assembly weighing 236 pounds.

INSIGHT:



AS a fellow member of your Association, I appreciate the invitation to address you today on a subject of much interest, not only to me personally but I think to all of us.

There are not going to be any major surprises. Possibly some of the things I have to say may not coincide with what is current thinking among some quarters. I offer them only as points for later discussion. My talk is more an explanation of what the Russians have done (with rotary wing equipment), what they are doing, and why they are doing it the way they are doing it.

VTOL has a long history in Russia. It started in Russia in 1910 with the experiments my Father did. He abandoned them because of a lack of technological potential in engines and airframes at that time. However, his actions did inspire a number of other people to continue and in 1922-1925 a machine was put together in Russia.

It was a surprisingly modern configuration which was actually flown about 1932-1933 by the Research Institute in Moscow. Two young engineers cut their eye teeth on this first project. One of them was Nicolai Kamov; the other was a young engineer named Mikhail Mil.

Helicopters didn't move beyond this first project in Russia for quite some time. Sporadic efforts during the late '30's were in autogyro imitations, and helicopters came into action right after WW II. In the *Fourth Five Year Plan* initiated during 1946-1950, the Soviet Government decided that it was going to get into the helicopter business. In Russia, there is no such thing as private initiative — any-

thing that is decided is, first of all, decided by the government, and once the government has established a priority for it, the funding is there. Funding is not there on a one year basis, as it is here in the U.S., it's there at least through that running *Five Year Plan*.

The decision was made in 1946 and the first helicopter that flew in 1950 was the Mil-1. It has a 575 hp engine; and it is still being very widely used for utility work, whaling, crop spraying, and for helicopter training in the State-run Soviet Aero Clubs. These are scattered throughout Russia and provide flight and mechanic training at ridiculously low prices, and conservatively estimated they train an average of 3,000 to 4,000 helicopter pilots a year.

These aircraft are the basic training aircraft on which Soviet pilots cut their teeth. A lot of them continue current; some go into the military services; some go into *Aeroflot*; and some go into their industrial combines, but the Russians are building up a tremendous backlog of rotary-wing trained pilots and mechanics.

In 1953, the Mil-4 was the next aircraft to fly. The Russians jumped the H-19 class of helicopter and went straight into the equivalent of an H-34 class. It had a "bathtub" below the fuselage which was used not only for navigation in marginal weather, but it also could be fitted out with a belly-mounted machine gun. The Mil-4 is a very, very rugged aircraft, and it's put together more like a truck or a tank than an aircraft.

In the military version, the window is to the side of the heel of the pilot — the windows have rubber plugs in them — and during a troop mission, the soldiers riding in the aircraft can poke the plugs out and stick their machine gun muzzles out of the windows. Well over 5,000 of the Mil-4 model have

Presentation made by Mr. Sikorsky at the 1973
AAAA National Convention in Washington, D.C.

SOVIET VTOL TECHNOLOGY



WHAT THEY HAVE DONE, WHAT THEY ARE DOING, AND WHY, BY UNITED AIRCRAFT'S SERGEI SIKORSKY

been built by the Russians, Chinese, and other people as well.

The civilian version of the same Mil-4 is being used in Asia, and the satellite countries as a light to medium category of utility helicopter. *Aeroflot* alone operates several thousand of these helicopters as a sort of liaison service all over Russia.

In 1957, the Mil-6 flew. Although it might not have been a surprise technologically, its sheer size was a distinct surprise. It has two 5,500 hp gas turbine engines; a gross weight of roughly 93,000 to 94,000 lbs.; and can carry, roughly, the equivalent of 65 to 90 armed troops in its large cabin. The significant point I'd like to bring home is that it only took the Russians seven short years from the time they built the first little Mil-1 to the time they fielded this very large, very sophisticated aircraft. This is one of the points I'd like to leave with you — the speed with which these people can assimilate their own knowhow and blend it with imported and observed technology, and then come up with hardware.

These aircraft, I have reason to believe, are being put together in fairly large quantities. I estimate conservatively that there are probably 350 to 400 of these Mil-6 machines operational today, and I have grounds to believe that the initial production lot was 500.

The next machine using components of the Mil-6 was the Mil-10, the Flying Crane. It first flew in 1960. Again, three years after they flew the Mil-6, they had the dynamic components down, under control and developed, and were able to put this Flying Crane together. This aircraft had a capability to straddle large lumber stacks, and it could carry large, bulky objects below its fuselage. The cargo might include a bus, a lightweight cylindrical object, and possibly even intercontinental missiles

from factories to on-site silos.

This same crane was followed very shortly afterwards by short-legged versions of the same machine. We're beginning to see it used in increasing industrial operations taking place in the Russian boondocks.

In 1965, the venerable Mil-4 was slowly replaced by the Mil-8. The latter first flew in '65 and had two 1,500 hp engines. To save time the prototypes were built using Mil-4 hardware: Mil-4 main rotor blades (they went from four to five blades on the rotor head); the intermediate and the tail gear box, I was told on best authority, were taken directly from the Mil-4; and even though they have developed slightly higher powered transmission systems in the meantime, this aircraft, in case of an emergency, can be flown today by using standard old Mil-4 blades and Mil-4 tail rotors. They can be ferried out under light gross weights to a repair base and either be scrapped or put back into operation. These same aircraft are being given away in fairly large quantities, and some have fairly sophisticated VIP interiors.

Helicopter operations in Russia form a half crescent located roughly from the Urals down around the Afghanistan-Mongolian-Chinese border. They are highly seasonal in nature, but are becoming more around-the-clock operations. From these central bases which are, generally speaking, in the southern part of Russia, helicopters move out in the spring as the thaws start and operate in the Russian tundra and far into the north.

As soon as the spring comes, their helicopters go out shuttling geological crews and industrial teams all over the Siberian peninsula. These same helicopters are increasing their operations through the winter and they're beginning to establish permanent villages and cities, permanent geological

stations, etc. throughout Siberia. They're beginning to develop the knowhow of operating these helicopters in the Siberian winter, which means living with temperatures that go down to -35 and -40 degrees. I've talked to pilots who've told me they're operating helicopters at -65 and -70 degrees.

In addition to supplying half of the world's gold, and having more forest reserves in Siberia alone than the total acreage of Western Europe, we're now beginning to realize that Siberia is almost literally floating on an ocean of gas and oil. Russia has what a lot of people consider to be the largest known reserves of oil and gas in the world. This has catalyzed a tremendous expansion in Soviet helicopter operations, and Siberia is unique because there is no place where they are not starting from Square 1. They are going across tundra with pilots and mechanics where it would cost sometimes as much as half a million dollars to build a mile of road, and these roads would have to be rebuilt extensively every spring after the snow and ice had melted.

It costs less to fly

When you have to do these jobs and you have to supply these cities you begin to develop other — and sometimes very impressive ways of doing it, and this brings in the helicopter. It becomes more cost efficient to do it by air than to build the roads.

One Russian told me that they've run cost-efficiency studies that indicate to service a 1,000 kilometer road, to keep it open and repaired, and to channel over this road 1,000 tons per year from Point A to Point B requires about 2,000 maintenance people just to keep the road open. By air they could do the same job with about 25% less people. They've run these estimates and realize that if they put a small airstrip at Points A and B they can get by with about 1,500 people.

Adding to the unique problems of Siberia are some of these nutty places where, for example, in the Central Siberian lowlands, swamps do not freeze, and not even in the bitterest Siberian cold. Saturated with peat which is decomposing, they generate so much heat that the ground and the water remain unfrozen all year. Radio navigation aids, as a result, are very, very marginal off the runways. There are certain airways that go generally east-west, and the Russians are just starting to

develop north-south chains. They usually locate radio aids at the intersection points, but there are very, very large areas — and some of them of tremendous importance geologically and technologically — that are not covered by radio aids.

Telephone pole navigation

To overcome this, they are developing all kinds of interesting techniques. I've heard fascinating rumors about helicopter airways that are marked in the same way we used to run the airmail in the States. They put telephone poles about every 3-4 miles apart that are high enough to stay clear of the winter snow. They require no maintenance. Their crossarms have chaff (radar tinsel) on them. These poles are used by the Russian pilots visually or by onboard radar. Maintenance is by a tractor or dogsled team that goes down the line and repairs the tinsel. And there you have a passive but very effective radio aid.

Consequently, eyeball navigation is important in this area of Russia, and this is the reason why most of the helicopters are very, very well-equipped as far as windows go. The Mil-8 cockpit is typical — plenty of windows. On the larger helicopters, such as the Mil-6, you'll notice that there is a navigator station mounted in the nose of the machine. The Russians always grin when someone accuses them of putting a bombardier station in the Mil-6 because they say that this helicopter as a bomber is an awfully expendable piece of hardware. But a navigator in marginal weather in Siberia is a must, and consequently they do it by putting him up in the nose to give him the visibility.

Bump on top

On the much larger aircraft, such as the Mil-12, they have right on top — on the floor above the pilot's cabin — a bump that is a fairly well-equipped navigator station. He has his own cabin, his own ground-mapping radar, and very adequate visibility to look downwards and forwards.

Medical services in Siberia are expanding as the population grows and they're using the Mil-4's and Mil-8's, and I've already heard that they're equipping the interiors of helicopters with a complete dentist's office, including a dentist's chair, and flying out to isolated communities and furnishing medical and dental services inside of the helicopter.

I've reviewed all of this to give you some feel for the in depth strength of the Soviet military operations, because *Aeroflot* is a part and parcel of the total overall military potential that the Soviet Government has. All of these pilots and all of these aircraft, in case of an emergency, can be diverted to back up actual front line military operations and, as was done in WW II, actually do become a part of the Soviet Air Force as soon as the balloon goes up.

Increasing numbers of helicopters are being used not only here in the industrial applications

Mil-6



EMBRY-RIDDLE

AERONAUTICAL

UNIVERSITY

Daytona Beach, Florida — Founded 1926

The only private, non-profit, co-educational,
accredited, **TOTALLY** aviation oriented UNIVERSITY

"Serving the professional aviation community."



BACHELOR OF SCIENCE

Aeronautical Studies
Aeronautical Science
Aviation Management
Aeronautical Engineering
Aviation Maintenance Technology
Aviation Maintenance Management
Aircraft Maintenance Engineering Technology
Professional Aeronautics (Miami, Florida)

ASSOCIATE IN SCIENCE

Aeronautical Science
Aviation Management
Aeronautical Studies
Aeronautical Engineering Technology
Flight Technology
Maintenance Technology

E-RAU GRADUATE PROGRAM

A Master of Aviation Management program is offered in Miami, Florida on the campus of Biscayne College. This program may be completed in twelve (12) months or less of fulltime (bootstrap) attendance. For information contact — Graduate Admissions Office, E-RAU, P.O. Box 2411, Daytona Beach, Fla. 32015.

but the same aircraft are being used, such as the Mil-6, in military operations. For instance, in recent military maneuvers on which we've been given some information, they've been used in coordination with Soviet armor. They carry the troops and by carrying troops by air you keep the roads open for armor and do not clutter them up with APCs and with other troop-carrying trucks. The helicopters stay behind the front-moving tanks but remain close enough to be called in to provide heavy troop support, when and if needed.

New families of weapons are being developed. They are, to a large degree, self-propelled weapons because the Russians know when they move into a beachhead or into an airhead they may not have enough manpower to lug this stuff around. But these light anti-tank and possibly anti-aircraft cannon can be moved under their own power and can ride around for about 5-6 kilometers on their own fuel before they finally get into the position they want to reach.

Now what conclusions can we reach from this very, very brief review of what has been done by the Soviets with the helicopter?

In response to government

The helicopters developed in Russia are developed in response to a specific government requirement. This requirement is either to support military operations or to support specific massive construction projects in the Soviet Union. Once the requirement has been established, they enjoy a definite, given priority and can be manufactured in any one of half a dozen factories. Even though helicopter manufacturing is specialized in one or two spots, these helicopters are purposely designed somewhat more simply and certainly more ruggedly than ours are.

The designs move into hardware very quickly. They do this by using a mixture of in-house know-how and experience, which they have built up since their first machines in 1950, and a very, very professional and an almost overnight evaluation of American and European designs. This allows them to provide surprising jumps in technology at very, very quick speed.

These rugged, simple designs also allow much easier farming out of the design from the central design bureau to any one of a half dozen production plants. It also allows a far quicker transfer of technology from the design office to any one of their satellite factories, once these are designated to build that particular type of helicopter. Obviously, all of this reduces maintenance requirements in the field.

Generally speaking, after five to ten prototypes are built, these aircraft are put into limited operational work and are flown and debugged. Once debugged, production starts and is committed to a definite *Five-Year Plan*, and therefore, they are able to commit three to five times as many numbers into production as we ever do.

We live with this annual review, Annual Budget;

quantities are increased and decreased; unfortunately, most of the time they seem to be decreased every year that a program keeps on going. In Russia, you do not have any of this. A definite plan is laid out and they work in blocks of 100, 500, or a thousand aircraft, depending on their quantity and the type of aircraft. One good example, the new Antonov crop-spraying biplane just developed by the Antonov group in Kiev. Fairly simple and rugged, it's been given to the Czechs to build. Right off the bat, *Aeroflot* ordered 3,000 copies.

Now, obviously, when a factory gets an order laid down that says, "You deliver 3,000 copies," it can run off forgings and heavy fittings and frames, and it can manufacture engines because it knows that it will be doing it for a production run of 3,000. Hence, you have a totally different economic picture.

These huge production runs result in significantly lower costs, and this further stimulates production by the fact that you can get a lot more of that hardware for a reasonably low price per unit.

Recent emphasis indicates the Russians want to go into an all-weather capability. They've already been operational with electrically-heated anti-icing of main and tail rotor blades for six to seven years. They're already developing full IFR capability, and on the Mil-6 and the Mil-8 they have a simple, rugged, and entirely workable autopilot. I've been told by good authority by the Russians that they now have a standard requirement that all aircraft that have been in production for the past five years have to be capable of IFR operations; all have anti-icing, and all must be capable of operating from Siberian to Mongolian temperatures, which means from -35 to -40 degrees up to +110 to +120 degrees.

Trade anything for survival

Their domestic and military requirements will continue to generate very, very large production runs. The (design) trend will continue to be, in my mind, devoted to fairly rugged, fairly unsophisticated helicopters. This will be done knowingly while accepting a penalty of perhaps 10% less payload per aircraft compared to our European or American designs. It's going to be done knowing that they'll cruise at 5 to 10 knots less airspeed, but it's also going to be possible to maintain this aircraft in the field for 500 to 1,000 flying hours with a quarter of the manpower that our equivalent machines require. This advantage, both in their boondocks and in case of a military operation, is something that all of us should take a look at. What I'm trying to say, in concluding this very brief review of Soviet helicopter design philosophy, is that the Russians sometimes take a look at a problem and solve it, not with a maximum but with a minimum of expenditure, and they're willing to trade off performance, payload, cruise speeds and a number of other things in order to arrive at a machine with which they can live in this very, very difficult and demanding Siberian environment.

ARMV Aviators have more than a transient cockpit interest in the continued attempts to match the known capabilities of the helicopter with the assumed needs and wants of a somewhat indifferent public.

For the Army Aviator who is running out of military flying time, a successful matching of useful work and capable machine could lead to a productive second career using special skills and uncommon experience.

For the pilot of the past, even belated recognition of his earlier expressed judgment that the chopper had unused potential would be very welcome.

For those who built, flew, maintained, supplied, planned missions for, or rode in as passengers, public skepticism as to the value of the versatile machine is hard to understand.

For the proponent of chopper use — particularly for those whose contacts with civilians have been either accidental or incidental to a military career — it is almost unbelievable that it has taken more than twenty years to find a prominent place in the non-military world for the ubiquitous machine. The many reasons given for this nonsuccess are varied and complex. The two reasons most often used, *unfamiliarity* and *high cost*, are simple enough but on close viewing are found to be invalid.

Some common beliefs

Of course there are always those who don't get the word, but it appears that almost everyone has a smattering of knowledge about the helicopter; that it can rise vertically, that it can carry useful loads, that it can go faster than a truck, that it is not delayed by traffic lights, road repairs or highway wrecks, that it makes its own roadway without regard for terrain, that it can deliver its load to one's doorstep — these are common beliefs.

Since the mid-'60's, there have been many highly visible and well financed demonstration projects, nearly all of which showed the helicopter to advantage as, frankly, they were intended to do. In the majority of cases, administration and financing have come from federal sources. This may well have contributed to the public skepticism regarding the results, but it certainly added to the information available. That the helicopter is not being used to its potential is undeniable, but that its capabilities are unknown is false.

Extreme cost is most often given as the major reason for leaving the helicopter as a weapon of war rather than putting it to work as a civilian tool. This is a rapid response, easily used by those who, for other reasons, are willing to retain the status quo. Cost alone has never been known to deter an individual, a group, the government, or the military from creating change when the value of change was believed to be of greater worth than the cost.

Any chosen letter of the alphabet will offer examples to illustrate the point. From the letter "B" we could get booze, breads, bingo, beer, bullets,

THE HELICOPTER KEEPS TRYING TO GET US OUT OF UNIFORM!!!

BY MORRIS G. RAWLINGS

and now, beef — all of which have greatly increased in cost without any appreciable increase in benefits — but they remain in great demand simply because we enjoy the benefits more than we abhor the costs. The persons who seek to dismiss the helicopter as being too expensive are really decrying its benefits; denying that its use will bring gain of great value.

For example, increased productivity per unit has long been assumed to be a benefit — a gain for everyone concerned. Today, management remains most likely to favor such developments, but only if they contribute to increased profit which is, after all, the most sought after benefit. Labor, too, is becoming less enamored of "improvements", particularly when such changes reduce the number of jobs and union members available. Proving that a helicopter can deliver loads further, faster, and with less handling than trans-shipped materials is not necessarily demonstrating a gain. Much depends upon the way one earns a livelihood.

What price?

But, granted that a large portion of the population does know what a helicopter can do, and further granted that the public will pay almost any price to get what they really want, why the public skepticism? Why, after twenty years, is the helicopter only used in special situations?

Some of the skepticism can be traced to the distrust which the profit-oriented citizen and industry holds for the academic/military/governmental/political grouping with its judgments and pronouncements of that which is good or bad; desirable or necessary to the public weal.

At this point in time, should members of the group declare it to be raining, all outside the group (and some in it) would feel called upon to step outside before accepting the statement as factual. When members of the group declare the helicopter a desirable tool for public service, that, in the minds of many, is tantamount to a further increase

in taxes — a certain event but one to be postponed as long as possible.

In 1968, through the Department of Transportation and its National Highway Safety Bureau, money was made available to fund helicopter programs in Detroit and in Nebraska. In 1969, three more programs were begun in Arizona, Mississippi, and Minnesota. Only Detroit found the helicopter valueless.¹

This report should have convinced the doubters that not all results were in before the tests were conducted. Other programs during the period were financed by filtered fiscal methods. One, a six agency effort known as *Military Assistance to Safety and Traffic (MAST)* was bitterly attacked at the time by John Ryan of the *Helicopter Association of America* as a direct violation of the traditional separation of military and civil activities (read that as unwelcome interference with the sale of new machines).

Another, conducted by the University of Ohio Hospital, used equipment from a local National Guard unit. All of these programs emphasized use of the helicopters in a medical emergency role and excluded use of the machine in a profit-making venture.

Good reasons

There were, of course, many good reasons for this choice of mission as a suitable entry point for the helicopter into civilian life. Due in part to Korean publicity, this was considered a dramatically useful role which the machine had performed for the military. Newspapers reported that the soldier bleeding in a rice paddy had nearly twice the probability of surviving as had his civilian counterpart lying on a national highway, simply because the soldier had a helicopter available for emergency transport and the civilian did not. It was, by no means, that simple. Nor was it true, as some expected, that this benefit — emergency transport

¹ "Ambulance Services and Hospital Emergency Departments", U.S. Dept. of HEW, March 1971, page 121.



— was so necessary that it could be furnished without contest or costing. Even motherhood receives both these days.

The *Highway Safety Act of 1966* had as one of its primary objectives, the reduction of accidents, injuries, and deaths on the nation's highways. To reach that objective, the Act required participating States to improve their emergency medical services or suffer the loss of highway construction funds normally allocated on a shared basis.

From the information available in each State, it was possible to compute lost income from failure to improve or gained income from improvements. The difference between the two can be said to represent the value of improvements; a figure which then becomes the upper limit of the costs allowable. With costing complete, the contesting of emergency transport means became more simple and the cost-effectiveness formula more fixed.

However, in 1966, committees of the National Research Council characterized accidental death and disability as the neglected disease of modern society and strongly suggested that improvement in the handling of medical emergencies was necessary to solve the problems of neglect. This upset the equation again in that it did not consider maximum allowable cost while adding to the required effectiveness.

Birth of the trauma

From this beginning the *American Trauma Society* was born five years later (a rather lengthy gestation period) and is today still seeking improvement in the methods used to combat the fourth leading cause of death in the United States.

The behind-the-scenes push of the *American Trauma Society* is furnished by John M. Howard, M.D. Dr. Howard, a renowned surgeon and an international authority on the subject of trauma, (he also has the Legion of Merit) is convinced that the Society's future success is, in part, contingent upon the effective use of the helicopter. He is a determined individual who may, by avoiding past errors, yet find a way to put the helicopter's potential to public use.

One error he will hopefully avoid is that of proceeding without adequate technical advice in both aviation and communications matters. On the theory that one need not be a chicken to recognize a good egg, many otherwise excellent administrators have relegated the aviator to a chauffeur's role while passing out dimes for use in public telephone booths. This has resulted in such gross misuse as the attempt to use a piston-engine helicopter for emergency services during a long spell of sub-zero weather. With a minimum delay of fifteen minutes between start and takeoff, no one involved could take pride in the project.

Another error which Dr. Howard will certainly avoid is that of considering the helicopter and its crew as the speedy muscle needed only to move the patient from the scene of the accident to the nearest hospital. From his personal experience and

from the documented reports such as the one from Ohio State University Hospital², members of the Society know that medical attention at the scene is mandatory. In Ohio, the report states that 13 patients who would otherwise have died were brought alive to the hospital because the helicopter team had the knowledge, skill, and equipment needed for immediate medical assistance as well as the means of rapid transport.

Even so, and despite the efforts of all concerned, it is highly doubtful that the benefits to be gained through use of the helicopter in emergency medical service can ever be considered to offset the high cost of stand-by operation — not, at least, in the type of nationwide application which helicopter advocates envision.

Many people require an ambulance but once in a lifetime and it is difficult to get them excited about making that penultimate trip. For emergencies, the high cost is attributable to lack of use.

In the chart below is some data taken out of context from an excellent report.

Era of the consumer

It seems apparent that effective helicopter use will include, but not be limited to, emergency medical services if the machine is to achieve widespread acceptance as a useful tool. Such usage will cut across municipal, county, and even State boundaries — both political and physical. It will require the development of a public service communications system which complements an existing military system. It will require operation of the system at a profit; or at least, without loss.

To overcome the indifference of the many and the vociferous objections of the few, it may even become necessary to permit demonstration projects and their evaluations to be conducted by other than government agencies or institutes of higher learning — despite their expertise. *Remember, this is the era of the consumer rather than that of the provider!*

On August 30, 1973 a quasi-government or-

ganization of high repute, the *National Research Council*, acting as the operating arm of the *Academy of Sciences*, caused the meeting of one of its subcommittees. This subcommittee, chaired by the tenacious *Dr. Howard*, added its voice to the list of those who believe the helicopter has a major role to play in civilian affairs and considers twenty years a long enough period of time to establish the need.

The subcommittee was disappointed earlier by what appeared to be a refusal on the part of the Secretary of Defense to release surplus military helicopters for civilian use, and on July 19, *Senator Curtis* of Nebraska queried the finality of this reported decision.

On July 23, *Joseph Cribbins*, a name well known to all Army Aviators, responded in the name of the Secretary. The impression gained from that response, other than the obvious one that *Joe* has lost none of his skill at mollifying the mighty, is that the Defense Department has few machines not in use or planned for use; that more would be in use if Congress would pass current legislation allowing MAST to expand; that DoD must first notify other governmental agencies of any forecast surplus and then loses control over their allocation; and that the few surplus machines not taken up by other agencies are so obsolescent that no one in his right mind would even take them as gifts, let alone pay for them.

I hasten to add that the above is purely an interpretation — *Joe* would never be guilty of such bluntness — but the fact remains that he did not make an unqualified offer of useful equipment, and neither the airlines nor the farmers were asked to produce without a subsidy.

Perhaps the best solution would be to introduce *John Howard* to *John Ryan* or to his successor at HAA, *Bob Richardson*; to allow *Senator Curtis* to referee; the *National Research Council* to judge; and *Joe Cribbins* to authorize the award of new helicopters — not in uniform — to the winner.

Someone would be sure to get a trauma out of that confrontation!

¹ "Medicopter", Roberts et al, 1970.

² "Helicopters in Emergency Medical Service" NHTSA Experience to date, Department of Transportation, December 1972.

FLYING TIMES OF HELICOPTERS EMERGENCY MEDICAL SERVICE

Location	No. of Machines	Missions Flown	Flight Time of Mission (Min.)	Period (Days)	Flight Time Per Day Per Machine
Pennsylvania	1	49	13.3	365	1.8 mins.
Nebraska	2	Unk	Unk	420	Unk
Los Angeles	1	100	46.9	180	26.0 mins.
Detroit	1	27	8.2	Unk	Unk
Arizona	1	213	Unk	Unk	Unk
Minnesota	1	79	Unk	180	Unk
Mississippi	3	828	6.0	180	9 mins.
MAST (5 locations)	5	1,165	66.0	365	42



SOLVED! — A classroom building was required at Rucker's Lowe AAF, but the one selected was too wide to move by road. Result: a CH-54 of the Graduate R/W Division of DUFT piloted by CW4 Benny D. Crocker delivered the 17,000-lb. building.



MILESTONE — MAJ Jerry R. Varnon, Commander of the 259th Avn Co (HH) at Finthen, Germany, presented 1,000-hour Sikorsky pins to members of his command for achieving this time in CH-54 Skycranes. The 1,000-hour level is a major goal for most flight engineers



CITED — The first NJARNG aviator to win the "Broken Wing" award, 2LT Barry R. Billman (3rd from left) hears citation read by State AO LTC John A. Maier (far right) as MAJ Wm. T. Harrison, State AvnSafO; COL Frederick C. Winkler, Chief, Bur & O&T; and MG William R. Sharp, Chief of Staff, NJ Department of Def, look on.



100% — BG Sinclair L. Melner, commander, Fourth ROTC Region, Ft. Lewis, Wash., breaks ground during opening of the Region's Aviation Division at Gray AAF. Looking on are, l-r, members of the "100% for AAAA" unit; CPT



and crewchiefs, and the personnel shown have sought missions that have taken them from Norway to Spain. From left to right are MAJ Varnon, SP6 John Schuster, SP5 James Fuller, SP6 Hartwell Wilson, SP6 Stephen Riley, and SP6 Lenzie Jones. The 295th is 100% AAAA.



SAFETY AWARD — LTG Orwin C. Talbott (left), Deputy Commander, TRADOC, presents the 1973 Daedalian Foundation Trophy to MAJ Jack W. Blien, former CO of Branch I, Contact Flt Div, DUFT, USAAVNS, for the unit's 13,000 accident-free hours.



Thomas J. Sinclair, CWO Lester Feutz; CWO Oliver C. Thomson, CWO John S. Olson; SP4 Glenn E. Murray, and SP5 Stacy L. Hunt. The Division flies missions within its 15-state area in U-21 aircraft.



CONGRATULATIONS — MAJ Harold Brown, the acting Campbell Army Airfield commander, congratulates Chief Warrant Officer Donald Graham (right), after presenting him with the Master Army Aviator Badge. The 20-year veteran Ft. Campbell, Ky. maintenance technician is assigned to Hq Co, U.S. Army Garrison.

Takeoffs

COLONELS

BEARDEN, William A.
6225 Trail Lake Drive
Ft Worth TX 76133

BOYLE, Dean G.
Box 119-A, Route 1
Shepherdstown WV 25443

COBB, John E.
1708 Tatum Drive
Alexandria VA 22307

DAVIS, W. Rex
9 Goethals
Ft L., Wood, MO 65473

DELANE, Patrick N.
2829 Forest Park Blvd
Ft Worth TX 76110

HARK, William H.
4317 Southwood Drive
Alexandria VA 22309

HOSTLER, Howard K.
6638 Rose Street
Ft Hood TX 76544

KLUEVER, Emil E.
Tooele AD, Qtrs 25
Tooele UT 84074

LOVE, John A.
3635 Estates Drive
Florissant MO 63033

MADDOX, Chesley B., Jr.
17 Russel Avenue
Ft Monmouth NJ 07703

MULLIGAN, Donald E.
2507 Holiday Place
Colorado Springs CO 80909

SLAVICH, Ivan L., Jr.
52 Walnut Street
Ft Devens MA 01433

SPENCER, Lloyd E.
5903 Winterhaven
San Antonio TX 78239

STANFIELD, John T.
1355 W. Michigan Av., #115
Pensacola FL 32506

THAYER, George E., Jr.
1452-B Fifth Avenue
Ft Knox KY 40121

VAN DYKEN, Harold B.
11293 E. Arkansas Ave
Aurora CO 80012

LT COLONELS

ADISS, Daniel A.
600 Myrtle Road
Naples FL 33940

AGUANO, Edwin M.
1024 Drennan Park
Ft Campbell KY 42223

ALLMAN, Bernard R.
3513 Allendale Drive
Raleigh NC 27604

ANGLIN, Richard C.
412 Southwest Drive
Fayetteville NC 28303

ASBELLE, Charles T.
320 Barker Road
No. Augusta SC 29841

BALINT, Barry T.
Hq. USARSO, G-1
APO New York 09834

BANKS, Douglas T.
325 Miami Avenue
Indianapolis FL 32903

BARDEN, Reginald R.
US Hawley Army Hospital
Ft Benj Harrison IN 46216

BLACKMORE, James R.
EUSA G4, Box 114
APO San Francisco 96301

BOYLE, Dennis M.
12509 Parkton Street
Oxon Hill MD 20022

BROMAN, Ralph W.
200 No. Howard, Apt 24
Clarksville IN 47130

BROWN, George P.
ODCSOPS, USAREUR 7A
APO New York 09403

BURTON, Dawson L.
4149 Addison Road
Fairfax VA 22030

BUSH, Emory W.
275 Glencourtney Dr., NE
Atlanta GA 30328

BYRD, Roger D.
376 Lampighter Lane
Marietta GA 30062

CARMICHAEL, Rex, Jr.
3749 Gray Fox Drive
Columbus GA 31904

COOPER, Robert G.
6914 Sprucewood Drive
Lawton OK 73501

COX, Robert G.
P.O. Box 1498
Reidsville NC 27320

CRAIG, Joe F.
R.D., Norwood Avenue
Blue Rd Summit PA 17214

DORSON, Dale E.
659 W. Fox Grove Court
Virginia Beach VA 23462

DOIRON, Nicholas H.
3444 Heather Drive
Augusta GA 30904

DOUCETTE, Roger A.
Eastern Area (MTMTS)
Brooklyn NY 11250

DRAPER, Edwin L.
3514 Cranbrook Drive
Wichita Falls TX 76308

ESTES, Billy G.
13107 Largo Drive
Savannah GA 31406

FARMER, Garry H.
9225 Canyon Oak
Salinas CA 93901

FILER, Robert E.
Qtrs 23-1 Army Depot
Granite City IL 62040

FLEMING, Hewell D.
7856 Orensia Drive
Annandale VA 22003

PCS — LTCS

PCS — LTCS

GALE, Paul B.
12838 Eadstone Lane
Florissant MO 63033

GERHARDT, William A.
P.O. Box 7005
Ft Gordon GA 30905

GRASMEYER, John M.
8637 Curtis Avenue
Alexandria VA 22309

GRIFFIN, Arthur R.
8704 Powder Horn Road
Springfield VA 22152

GRIM, Charles D.
JUSMAG, K
APO San Francisco 96358

HAGEE, Robert D.
USATTU
APO New York 09253

HALLMARK, Robert C.
2903 Esarona Court
Fairfax VA 22030

HALLY, John E., Jr.
2712 Springwood Drive
Augusta GA 30904

HAMNER, Ralph H.
2402 Oak Drive
Ft Pierce Shrs FL 33450

HATTON, Richard R.
Dir-Svcs, Spcl Dist, Bayern
APO New York 09696

HOWELL, Thomas R.
2762 Ferguson Circle
Ft Eustis VA 23604

SBELL, Richard A.
104 S. Hilldale Road
Salinas CA 94601

JACKSON, George F., Jr.
Box 385, R.D. 1
Boalsburg PA 16827

JOHNSON, David S.
3d Bn, SESS
Ft Gordon GA 30905

JOHNSON, Edward H., Jr.
4022 Delvin Drive
Tallahassee FL 32303

JONES, Robert L.
11281 Foster Road
Los Alamitos CA 90720

KENDRICK, Floyd R.
3310 E. Rancier, #309
Killeen TX 76541

KILGALLIE, John E.
Hqs. TASCOM, DCSOPS
APO New York 09058

KOTULAN, Adolph F.
5894-B Adams
Ft Knox KY 40121

LARSON, Gerald W.
R.R. 1, Box 284
Leavenworth KS 66048

LENZ, Daniel A.
Hq. 2d Trans Group
APO San Francisco 96259

LITTLE, Ronald W.
14 Carty Avenue
Ft Monmouth NJ 07703

PCS — LTCS

LOCKWOOD, Roy L.
49 Avn Bn, 600 S. Arpt Way
Stockton CA 95206

LONGARZO, William
450-9 Kearny
Ft Leavenworth KS 66027

MARSHALL, Thomas J.
217 Colmar
Ft Ord CA 93941

MASCIA, Donald J.
Bx195 MACTHAI JUSMAG
APO San Francisco 96346

MASON, Arthur W.
702 Joseph Drive, R.R. 2
Collinsville IL 62234

McGUFFIN, Robert F.
Route 1, Box 257N10
St Augustine FL 32084

McLAUGHLIN, Leonard F.
140 Devon Drive
Clearwater FL 33515

McMILLON, Don
Hq. 7th Army Training Ctr
APO New York 09114

MILLER, Charles H.
118 Hertzler Road
Newport News VA 23602

MILLER, Eugene G.
607-B Ft. Baker
Sausalito CA 94965

OSTERMEIER, William F.
4/73d Armor
APO New York 09046

OWENS, Bennett G., Jr.
2303 Vandemere Avenue
Fayetteville NC 28304

PERSONS, John E.
1201 Rustic Circle St
Huntsville AL 35802

PIERCE, Fred W., Jr.
Off Sr Adv., Camp Murray
Tacoma WA 98430

PLISSEY, Robert D.
Hq. MASTER
Ft Hood TX 76544

PULLIAM, Nathan M.
Hq. 7th Sqn, 17th Cav
Ft Hood TX 76545

SANDERS, Curtis M., Jr.
Hqs. EUSA, Avn Div (G3)
APO San Francisco 96301

SAUNDERS, Joe W.
Bx700, ARSIC, ARMISH
APO New York 09205

SCULLY, Robert C.
586 Spruce Street
Ft Devens MA 01433

STADLER, Louis J.
Cherry Valley
Arkansas 72324

STIPE, John W.M., Jr.
418 Camelot
Collinsville IL 62234

STRUM, Ernest C.
R.R. 2, Box 4A
Walhalla ND 58282

PCS — LTCS

VASSAR, Robert B.
Route 5
Statesboro GA 30458
VOELKEL, Eugene
5499 Stoneybrook Court
Mableton GA 30059
WALKER, Travis L.
Hq and Svc Bn, Spc Trps
APO San Francisco 96331
WALL, James A.
211 Woodmont Road
Jamestown NC 27282
WELCH, Elliot J.
PACDA
Ft Benj Harrison IN 46249
WETHERBIE, Robert F.
70th Avn Det
APO San Francisco 96303
WHITE, Robert L., III
103 Audubon Way
Enterprise AL 36330
WOODS, George J., Jr.
213 Tiffany Lane
Willingsboro NJ 08046

MAJORS

ADAMS, Bobby R.
2525 Norris Rd., #54
Columbus GA 31907
BAILEY, Gary G.
98 Ingalls Road
Ft Monroe VA 23651
BAILEY, Willard E.
1542 Dianda Drive
Concord CA 94521
BALLARD, William G.
412 Carolina Circle
Durham NC 27707
BRINKLEY, Lemuel G.
5855 Dupas
Ft Hood TX 76544
CARMAN, Dean R.
Hq, USAMEDCOMEUR
APO New York 09403
CHAPMAN, Thomas R.
6508 Hawkeye Circle
Colorado Springs CO 80907
CHITREN, Vincent R.
316-8 Doniphan Drive
Ft Leavenworth KS 66027
CLEMENS, Paul J.
78 Knollwood Drive
Newport News VA 23602
COOKE, Charles B.
48th Trans Co
APO New York 09454
DALY, William G., Jr.
53 Endl Avenue
Ft Rucker AL 36360
DANIELSON, James D.
6763 Diconza Way
San Diego CA 92119
ELLETT, Dan A.
15 Anderson Street
Ft Stewart GA 31313
ESTES, James O.
1908 N.W. 72d Street
Lawton OK 73501

PCS — MAJORS

FERRING, Theodore J.J.
450-6 Kearny
Ft Leavenworth KS 66027
FITCH, Kenneth L.
523 U.S. Lauman
Ft Sill OK 73503
FULLER, George D.
3063-A Stony Lonesome
West Point NY 10996
FULLER, James A.
263-A Anzio Road
Ft Lee VA 23801
FUNDERBURK, Ronald N.
Box 5085
Ft McClellan AL 36201
GEER, William A., Jr.
Box 254
Ft Monroe VA 23651
GOUGE, Gerald F.
924 Chadwick Dr., A.1
Kingsport TN 37662
HACKETT, Robert T.G.
110 Victoria Street
Enterprise AL 36330
HAYES, Don L.
Hq, 2d Bde
APO New York 09034
HILL, Howard D., III
3719 Matson Avenue
Cincinnati OH 45236
HOOD, John W.
BOQ 5673, Apt 1
Ft Sill OK 73503
JOHNSON, Larry E.
State Univ Sta., Box 5322
Fargo ND 58102
JOHNSTON, William B.
302-A Carpenter Court
Ft Riley KS 66442
KENNEDY, Dennis R.
P.O. Box 3217
Ft Sill OK 73503
KING, Robert A.
7803 Leyte Av., CL 54
Norfolk VA 23511
KRAUS, Stanley S.
REDCOM, AASUPP Ele
Mac Dill AFB FL 33608
LINER, Cornelius E.
438 Sheffield Circle
Augusta GA 30904
LONGHOFFER, James E.
Trp D, 1st Sdwn, 1st Cav
APO New York 09326
MacWILLIE, Donald M., Jr.
1810 Muir Drive
Killeen TX 76541
McFEELY, George D.
157 Atsion Road
Medford Lakes NJ 08055
McINERNEY, Bernard M.
4 Letourneau Street
Rochester NH 03867
METCALF, Ronald C.
HHC, 7th Signal Brigade
APO New York 09028
MOUNTCASTLE, A.M.
1 Edith Lane
Daleville AL 36322

PCS — MAJORS

NORTON, James A.
Route 2, Box 277-J
Belton TX 76513
PAWLK, Eugene A., Sr.
7310-B Gardner Hills
Ft Campbell KY 42223
PEFFERS, Gerald L.
1013 No. Central Street
Knoxville TN 37917
PIERCE, Dale W.
95-046 Hokutwa St., Apt 11
Mililani Town HI 96789
POSHUSTA, Allyn D.
330 Golden Gate Avenue
Belvedere CA 94920
PURCHASE, Collins J.
873 Loraine Drive
Newport News VA 23602
RAAB, Robert H.
1211 Floyd Road
Columbus GA 31907
RECK, Donald W.
928 5th Avenue, West
Spencer IA 51301
RONEY, George H., Jr.
HNB, 3d AR Div Arty
APO New York 09165
ROSSER, Terry N.
Route 1, Box 313
Kempner TX 76539
ROUNSEVILLE, Richard G.
317 Indian Ridge Rd., Rt 3
Ft Collins CO 80521
SCHULTZ, Jackson K.
Engr Dist, RIYADH
APO New York 09038
SELMAN, Steven E.
40-B Vine Street
Randolph MA 02368
SMITH, John A.
PSC Box 441
APO New York 09009

PCS — MAJORS

SMITH, Richard H.
1324 Weatherby Drive
St Louis MO 63141
SMITH, Robert H.
98 5th Arty Road
Ft Leavenworth KS 66027
SOKOWOSKI, Louis E.
1320-H Richens Point Rd
Aberdeen PG MD 21010
SPANJERS, Leonard J.
Route 4, Box 39
Brookings SD 57006
STANSELL, Ernest L., Jr.
1102 Canterbury Lane
Colonial Hts VA 23834
SUTTON, Jack B.
MOQ 30-1, NAS
Corpus Christi TX 78419
TWENTER, J.D.
203 Colmar
Ft Ord CA 93941
VENTI, George W., Jr.
14th Co, TSBUSAS-DCD
Ft Benning GA 31905
WARE, Lesly F., Jr.
2609 Post Oak Circle
Copperas Cove TX 76522

CAPTAINS

ABELL, James M.
618 Welsh Place
Fayetteville NC 28303
ALVARADO, Michael J.
5859-A Jamison Street
Ft Knox KY 40121
AMARO, Joe J.
P.O. Box 371
Round Rock TX 78664
ANGELL, Raymond S.
214 Riverside Drive
Brynoln PA 18403



THE FIRST... PVT Linda K. Plock works on an aircraft engine as part of her training as the first woman to attend the Aviation Maintenance Course at Ft. Rucker, Ala.

PCS — CAPTAINS

BABISH, Bruce K.
532d MP Company
Ft Dix NJ 08640

BADDOUD, William A.
5810 Walton Road
Bethesda MD 20034

BAKER, Douglas L.
R.R. 1, Box 12
Shafter MN 55074

BALLARD, Stephen D.
Route 3, Box 225
Junction City KS 66441

BANES, Thomas P.
108 College Hill Road
Enola PA 17025

BARTHLE, Robert C., Jr.
10475 Faulkner Ridge Cir
Columbia MD 21044

BEATTON, Kit Wm.
HHC, 32d Armor, 3d AD
APO New York 09074

BEATTY, Eugene E., Jr.
6515 Leavell Drive
Ft Bliss TX 79906

BELCOE, Theodore G.
107 Oxford Drive
Savannah GA 31406

BLACKWELL, Brendan P.
2106-B Irwin
Ft Eustis VA 23604

BOLEY, Kenneth O.
214 Omega Circle
Enterprise AL 36330

BRANNAN, Robert E., III
1104-C Thompson Circle
Ft Eustis VA 23604

BRAUDAWAY, Jessie A.
4611 S.E. Ellsworth Circle
Lawton OK 73501

BRISTOW, William D., Jr.
2663 Regina Avenue
Thousand Oaks CA 91360

BROWN, Connie A.
3515 Baker Plaza, Apt 10
Columbus GA 31903

CAMPBELL, James T.
582d Trans Co
APO New York 09028

CAMPBELL, Richard L.
418 East Mayfield
San Antonio TX 78214

CANON, Charles M., III
204 East Cherokee Drive
Harker Hts TX 76541

CARTER, John P., II
Air Troop, 11th ACR
APO New York 09146

CARY, James S.
5314-C Gardner
Ft Knox KY 40121

CONNER, David L.
P.O. Box 64
Cassoday KS 66842

CONNOLLY, Raymond
Air Cav Trp, 11th ACR Regt
APO New York 09146

COREY, Robert G.
4301 Bushie Court
Alexandria VA 22312

PCS — CAPTAINS

CROSSLAND, Gary F.
15 Playford Avenue
Brownsville PA 15417

CULVERHOUSE, Jerry R.
1878 Armistead Drive
Clarksville TN 37040

CURRAN, Wilburn A., Jr.
HHC, 2 Bn, 6 Inf, Box 2013
APO New York 09742

CURTIN, Stephen J.
4567-D W. Broadway Rd
Hawthorne CA 90250

DELVAUX, James L.
570-A Forney Loop
Ft Belvoir VA 22060

DEPERRO, John F.
822 Cascade Drive
Newport News VA 23602

DORVILLE, Ronald E.
HHC, USACDC, CDEC
Ft Ord CA 93941

DRIVDAHL, James A.
10945 Bluffside Dr., #111
Studio City CA 91604

DUMOND, Chauncey A.
Star Route, Box 114
Hancock NY 13783

DUNHAM, Dale L.
5485-H Jamison Street
Ft Knox KY 40121

DURR, George W., III
102-B Running Avenue
Ft Benning GA 31905

EARLS, Gary E.
836 Derbyshire Road
Daytona Beach FL 32017

EFNOR, Samuel J.
234 South 2 East
Logan UT 84321

ELLIOTT, Howard R., III
AHS Crse 6-8-C22, C12
Ft Sam Houston TX 78234

ERRICKSON, Edward W.
4415 E. Grant Rd., #A145
Tucson AZ 85712

EVORS, Fredrick L.
HHC, V Corp (H-1)
APO New York 09079

FERRIO, Robert C.
9812 Box Ford Way
Louisville KY 40222

FLEMING, Frederick C.
41 Johnson Street
Ft Rucker AL 36360

FREDERICK, Alan W.
1110-D Thompson Circle
Ft Eustis VA 23604

FRIES, Alan D.
300 Montreal Drive
Lafayette LA 70501

FULLER, Marvin E.
P.O. Box 6012
Ft Bliss TX 79906

GASTON, Alberto J.
40 Thunderbird Pkwy, H2
Tacoma WA 98498

GILLMAN, Jay E.
7728 Capron Court
Lorton VA 22079

PCS — CAPTAINS

GLASS, Patrick R.
P.O. Box 74
Ft Sheridan IL 60037

GLENNON, William A.
1815-A Kessler Court
Ft Benning GA 31905

GOTSCHALL, Bart I.
13610 Town Farm Road
Upper Marlboro MD 20870

GRAZIER, Edward H.
2821-A Fairfields Court
Aberdeen PG MD 21005

GREGGERSEN, Mahlon C., Jr.
9854 Barkley
Belleville MI 48111

HAMILTON, Clyde
Route 1, Box 143
Shelbiana KY 41562

HANES, Stephen T.
HHC, 1st Bn, 32d Armor
APO New York 09074

HANKINS, Robert S.
516 E. Greenway Drive
Tempe AZ 85282

HARMES, Michael H.
18 Delafield
Ft L. Wood MO 65473

HARTLEY, David C.
HHC, EUSA G-3 (Avn)
APO San Francisco 96301

HEATH, Herman S.
3734-M McLeod
Columbia SC 29206

HICKS, David H.
1529 79th Avenue, North
St Petersburg FL 33702

HICKS, Kenneth L.
11232 E. Virginia Place
Aurora CO 80012

HILL, Richard M.
11 Nash Road
Acton MA 01720

HILL, Roger D.
4411 Evansdale Road
Woodbridge VA 22191

HODGSON, Allen B.
P.O. Box 3452
Columbus GA 31903

HOLLENMAN, Samuel D.
2400-B Worth Court
Sacramento CA 95825

HOVER, Forest H.
125 Fischer Drive
Newport News VA 23602

ILER, George A.
Hq. USA 5 Rd, Bldg 84
Ft Sheridan IL 60037

JACKSON, David C.
237 Medical Det
Ft Ord CA 93941

JARVIS, Roland B.
2190 Memorial Dr., #D66
Clarksville TN 37040

JELINSKI, Barry
5423-C Mulvaney Street
Ft Knox KY 40121

JONES, Lindon D.
2035-B Werner Park
Ft Campbell KY 42223

PCS — CAPTAINS

KEEGAN, John J.
Carter Hill Rd., Apt 110B
Montgomery AL 36106

KEITH, David A.
5303 Sherwood Drive
Lawton OK 73501

KERR, John A.
Qtrs 457C, Ft. Richardson
APO Seattle 98749

KIEL, Dale A.
4265 Oakland Avenue
Ft Knox KY 40121

KONKLE, Thomas E.
Box 194
Dupont WA 98327

KRYWAY, James G.
529-A North Valdez
Ft Benning GA 31905

KUNSTEL, Kenny J.
5470-C Kelly Street
Ft Knox KY 40121

LAIRD, Curtis A.
129B Zuckerman Avenue
Ft Benning GA 31905

LONGAN, Patrick B.
41st FA Group
APO New York 09152

LOWERY, Roy J.
20th MP Det
APO New York 09052

LUTZ, James E.
HHT, 3d Sqdn, 7th Cav
APO New York 09033

LUTZ, Joseph J., Jr.
4627 Santa Fe
Lawton OK 73501

MANLEY, Clarence Jr.
207th Aviation Co
APO New York 09102

MARTIN, Larry K.
191-A Village Rd., NCAD
New Cumberland PA 17070

MATTINA, John C.
122-B Kessler Drive
Ft Benning GA 31905

MAXWELL, William E.
12746 Dulcinea Place
Woodbridge VA 22191

McHUGH, Conrad J.
5449-D Gilkey Street
Ft Knox KY 40121

MELO, Michael J.
Hq Det, 7th ATC
APO New York 09173

MELVIN, William C.
7510 88th Avenue S.W.
Tacoma WA 98498

MEYERS, Daniel L.
2855 Rice St., Apt 1224
Roseville MN 55113

MEYERS, John J.
4635 Gore Blvd., Apt 98
Lawton OK 73501

MIHATA, Kevin K.
203 Tunisia Road
Ft Ord CA 93941

MIKULAN, Michael G.
R.D.5, Fawn Haven Drive
Gibsonia PA 15044

PCS — CAPTAINS

MILLER, John, Jr.
Route 3, Box 213-K
Bryan TX 77801

MONG, James J.
P.O. Box 292
Burlingame CA 95010

MOORE, Earl F., Jr.
1510 College St., Apt J2
Lacey WA 98503

MURPHY, William F.
1616-B Ash Street
Pt Dix NJ 08640

MURPHY, Wilson D.
2330 Fry Blvd., Apt J
Sierra Vista AZ 85635

NEWLAND, Michael E.
7 Vaughn Court
Eatontown NJ 07724

NICHOLS, Keith R.
1-A Arden Lane
Mt Holly NJ 08060

NILIUS, Robert M.
Box 1388
Zephyr Cove NV 89448

NOYES, Paul M.
356th Avn Det
APO New York 09114

O'CONNOR, Michael P.
USAG
Ft Lewis WA 98433

OLSON, Lawrence A.
60 Regency Square Drive
Newport News VA 23601

ORLOB, Wesley J.
1115-A Thompson Circle
Ft Eustis VA 23604

PARR, Bernard A.
2717 Oxford Court
Steilacoom WA 98388

PATRIACCA, Samuel J., Jr.
12 Engr Bn, Attn: CDAAC
APO New York 09111

PEGUES, Michael P.
4517 Timothy Street
Columbus GA 31907

PENWELL, Robert D.
3737 Persimmon Circle
Fairfax VA 22030

PERRY, Stanley J.
2243 Rosier Rd., Apt 17C
Augusta GA 30906

PETERSON, Jon M.
84 Greenwood Road
Madison NJ 07940

PHILLIPS, Gary D.
7619 Blue Boy Place
Louisville KY 40291

POOL, Thomas C.
62d Aviation Company
APO New York 09165

PRICE, James E., Jr.
115 Stanley Street
Ft Huachuca AZ 85613

PUMPHREY, Michael P.
5027 Village Way
San Antonio TX 78209

RENDER, Terrence M.
325 Arbor Grande Dr., Fl
South Daytona FL 32019

PCS — CAPTAINS

RENSCHEN, Paul S.
1836 Cottonwood Drive
Augusta GA 30906

RHODEHAMEL, Kurt A.
Rt 2, Magnolia Drive
Daleville AL 36322

RIBAR, Frank A.
29064 Pearson
Selfridge ANGB MI 48045

RICHMOND, Charles D.
3d Bn, 17th Field Arty
APO New York 09093

ROBERSON, Hugh B.
1473 Wildrose Lane
Holly Hill FL 32017

ROGERS, James R.
Sve Btry. 1 Bn, 40 FA Regt
APO New York 09165

ROLAND, Kenneth P., II
162 North 5th Street
Middletown IN 47336

ROSEN, John H.
12 Castle Way
Ft Rucker AL 36360

RYDER, Francis O.
23d Engr Bn, 3d Armd Div
APO New York 09165

SAVELLI, John A.
PSC Box 84
APO New York 09611

SCALF, Cecil F.
12 Clark Road
Ft Campbell KY 42223

SCHACHER, Marty
228 Bedlow
Stockton CA 95207

SCHMITT, Robert S.
3972 Montgomery N.E., #8
Albuquerque NM 87109

SCHUSTER, Michael W.
277 Hillwood Street
Martinez CA 30907

SCOFIELD, Thomas C.
R-D Cmd, DA, SGRD, EDE
Washington DC 20314

SCRIVEN, Stephen
9821 New Grove
Tacoma WA 98498

SHEETS, David L.
464 N. Oakley Dr., #206H
Columbus GA 31906

SHIPES, Joe F.
430-A Craig Drive
Ft Benning GA 31905

SHIPLEY, Berchard R.
2565-C Bullard Street
Ft Eustis VA 23604

SHIRK, Charles M.
Qtrs 528-A, Forney Res.
Pt Belvoir VA 22060

SHIRK, William L.
2230 Prairie St., Apt 1C
Emporia KS 66801

SHUMAN, Wallace B., Jr.
1327 Trenton Court
Columbus GA 31907

SIMON, Robert W.
503 Morgan Lane
Ozark AL 36360

PCS — CAPTAINS

SKAADEN, Richard A.
5515 Cache Rd., Apt G3
Lawton OK 73501

SMITH, Gale N.
1/37th Armor, C Co
APO New York 09326

SMITH, Harbert W.
Hq, 1st Bn, 59th ADA
APO New York 09185

SPAIN, Charles V.
Trans Actv, Camp Zama
APO San Francisco 96343

SPENCE, Philip W.
831 Crown Avenue
Scranton PA 18505

SPENCER, Warren W.
P.O. Box 624
Carundi, Canal Zone

SPROUSE, Timothy D.
HHC 2/32d Armor
APO New York 09045

STARKE, Donald W.
P.O. Box 426
APO Seattle 98733

STAURSET, Sverre O.
4312 Old Macon Rd., #18
Columbus GA 31907

STEVENS, James L.
550-B Forney Loop
Pt Belvoir VA 22060

STUTZMAN, Charles R.
2417 N.W. 3d Avenue
Mineral Wells TX 76067

SWATTS, Roy D.
2260 S.W. 19th Avenue
Ft Lauderdale FL 33315

SWEENEY, Edward J., Jr.
11 Demere Street
Ft Stewart GA 31313

SYLVESTER, John B.
Air Troop, 11th ACR
APO New York 09146

PCS — CAPTAINS

TAYLOR, Warren B.
5401-H Chaffee Avenue
Ft Knox KY 40121

TEAS, James H.
6405 Aztec
El Paso TX 79925

THERIAULT, Raymond J.
129 Redondo Court
Marina CA 93933

THIELE, Alan R.
7406 Baldwin
Lawton OK 73501

THOMAS, David
Route 2, Box 80
Wharton TX 77488

THORNALL, Benjamin C.
5649-D Demoret
Ft Knox KY 40121

VAN NUISE, Robert W.
9014 Dixon Drive
Clinton MD 20735

VASSETT, Frank J.
23 Slocum Street
E. Providence RI 02914

VENDETTI, Augustine
5574-A Conroy
Ft Knox KY 40121

WAHL, Elmer F.
30th Field Hospital OPC
APO New York 09178

WARREN, Lynn E.
Route 2, Box 108
Lamay CO 81052

WHITEING, Leonard W.
818 Tipparry Drive
Papillon NB 68046

WIEGNER, John
172-1 Treestop Drive
Fayetteville NC 28301

WILKINS, Timothy
2710 Live Oak
Copperas Cove TX 76522



REENLISTMENT — SFC Robert Vaughan, AAAA Soldier of the Year for 1973 (right) receives his discharge papers from MAJ Billy V. Smith, commander of Battery B, 4th Battalion, 77th Field Artillery, 101st Airborne Division (Airmobile) in a recent Ft. Campbell ceremony. Sgt. Vaughan, who is an aircraft maintenance supervisor, reenlisted for six years.

PCS — CAPTAINS

WOOD, Bruce F.
5422-G Gilkey
Ft Knox KY 40121
WORKMAN, Paul L.
R.D. 8
York PA 17403
YOOD, Richard P.
568W12950Bristlecone La
Hales Corners WI 53130

LIEUTENANTS

ANDERSON, Johnny O.
4082 89th Street
APO Seattle 98731
BENSON, David W.
7384-A Gardner Hills
Ft Campbell KY 42223
BROWN, Steven
116-5 Waters Hall
Ft Riley KS 66442
COUGHLIN, Michael
USATSCN, AMOC 5-74
Ft Eustis VA 23604
CRAIG, Walter
111 Rigny Rd., Apt B
Newport News VA 23606
ELLES, Glynn T., Jr.
H-A Co, 122d Maint Bn
APO New York 09165
FITZPATRICK, Steven
14327 Deloche Crescent
Newport News VA 23602
FLEAGLE, Norman
Rural Route
Douds IA 52551
GATES, Carl G.
524 Greenway Avenue
Trenton NJ 08618
GOODMAN, Joseph
432 Tara Court, #17
Newport News VA 23602
HINOTE, Paul F.
607 Barcia Drive
Pensacola FL 32503
KRIEGER, Mark
14317-C Deloche Crescent
Newport News VA 23602
LICHTIG, Jan
Quarters 2566-D
Ft Lewis WA 98433
MADDER, Gary
619 South 10th Street
Killeen TX 76544
MAERTENS, Thos.B., Jr.
1581 Elberta Drive
Clarksville TN 37040
MEHRINGER, Kenneth
11100 Jefferson Av., #88
Newport News VA 23602
MEYER, J. Paul
Box 524
Brookings SD 57006
MITCHELL, Robert
2409 Reigh Count Drive
Owensboro KY 42301
OGDEN, James H., Jr.
48th Avn Co
APO New York 09177

PCS — LIEUTENANTS

RIEDER, John E.
4019-3 Pine
Ft Wainwright AK 99703
ROCHE, Richard B., Jr.
803 "D" Avenue
Lawton OK 73501
ROSS, Victor L.
HHC, 19th Avn Bn
APO San Francisco 96271
SNOWDEN, James M.
P.O. Box 4457
Stage College MS 39762
SONNEMANN, Craig E.
1395 Potomac Heights Dr
Oxon Hill MD 20022
SWEITZER, William P.
3639-D Rebecca Lane
Colo Springs CO 80907
TRAVIS, Steven F.
13441 Warwick Blvd., #27
Newport News VA 23602
VOGEL, William L.
10326StellacomSW., #5
Tacoma WA 98498
WALKER, Ralph E.
1213A Werner Park
Ft Campbell KY 42223
WILLIAMSON, Dennis A.
1222-A Werner Park
Ft Campbell KY 42223
WILSON, John M., Jr.
620 Ramona Ave., Apt D
Monterey CA 93940

CW4'S

BERTHOT, Hugh V.
101 Richardson Drive
Schertz TX 78154
FOLES, Shelton R.
2435 Walker Street
Columbus GA 31903
HEAPE, Artie A.
P.O. Box 5037
Ft Lee VA 23801
JOHNSON, Paul H.
312 Willow Oaks Drive
Ozark AL 36360
KYLER, Russell S.
DIO Maint, Bldg 5033
Ft Sill OK 73503
LISONBEE, Lawrence J.
4530 Picturesque Circle
Colo Springs CO 80917
PROCTOR, Howard L.
355th Aviation Co (HH)
Ft Eustis VA 23604
PURSER, Thomas E., Jr.
5335 Mesa Court
Fayetteville NC 28303
ROBERSON, Frank L.
Route 5, Box 269K35
Phenix City AL 36867

CW3'S

ANDERSON, James D.
160 North Harris Drive
Ft Rucker AL 36360

PCS — CW3'S

BARNES, Roger A.
Route 13, Box 208
Fayetteville NC 28301
BOYER, Bruce L.
392-G Kenal
Ft Richardson AK 99505
CANNON, Frank R., Jr.
4207 Elmhurst
Lawton OK 73501
GEORGE, Warren D.
209 Oak Drive
Daleville AL 36322
GOODROE, Charles T., III
204 Myrtlewood Drive
Enterprise AL 36330
JOHNSON, Robert N.
302 East Avenue "D"
Copperas Cove TX 76522
KLARNER, Robert D.
13 Diamond Avenue
Ft Rucker AL 36360
LIGHTPOOT, John R.
4265 Stillman Avenue
Newburgh NY 12550
LOUGHMILLER, James W.
Route 2, Lot 2226
Copperas Cove TX 76522
MACMICHAEL, Paul
D Trp. 3 Bn, 5th Cavalry
Ft Lewis WA 98433
MCLEISH, Ronald W.
207 State St., Apt 5
Ludlow MA 01056
MEADOWS, John W.
2010 Middlefield Road
Boise ID 83704
MELSON, Walton R.
478th Avn Co (Hvy)
Ft Benning GA 31905
RIPPERDA, Francis J.
1705 Lightsay Road
Austin TX 78704
SCOTT, Beryl E.
547-B No. Valdez Court
Ft Benning GA 31905
SEIDL, Herbert R.
34 Galt Lane
Ft Rucker AL 36360
SMITH, Donald R.
202 Landon Drive
Lampasas TX 76550
SNOWDEN, Braxton W.
4305 Eldorado Drive
Woodbridge VA 22191
WHIGHAM, Charles E.
P.O. Box 662
Bellevue FL 32620

CW2'S

ADAMS, Joe S., II
HHC, 11th Avn Group (Cbt)
APO New York 09025
ANDERSON, Peter G.
8539 Willis Ave., Apt 20
Panorama City CA 91402
BAKER, Roger A.
6516 McNutt Way
Cypress CA 90630

PCS — CW2'S

BANCROFT, Steve
4 Birch Street
Monsey NY 10952
BARNARD, Roger Q.
22 University Heights
Hopkinsville KY 42240
BARTLETT, Steven R.
10569 Ramey
Ft Bliss TX 79908
BEISHLIN, David C.
PO Box 46, Oak La., R.D.1
Zionsville PA 18092
BIBLE, Michael L.
271st Avn Co (ASH)
APO San Francisco 96271
BROM, John A.
184 North Harris Drive
Ft Rucker AL 36360
CHAPPEE, Keith A.
Rt 10, Lafayette Road
Clarksville TN 37040
CUEVAS, Robert M.
71st Avn Co, Box 38
APO New York 09047
DENNIS, Donald W.
CMR 5, Box 10049
Ft Rucker AL 36360
DONOHOO, Donald P.
123-B Kessler Drive
Ft Benning GA 31905
ELLISTON, Tony M.
Rural Route 1
Stockton MO 65785
ENKO, Rodney E.
5555-1 Lockridge Loop
Ft Hood TX 76544
ENLOW, Carl R.
3571-A Ridgeway Street
Laurelde PA 19605
FAST, Ronald F.
102 Fuqua Avenue
Ozark AL 36360
GARDNER, Charles L.
101 Shaw Street
Ft Bragg NC 28307
GREENAUER, George K.
1325 Camelot Drive
Fayetteville NC 28304
GREGORY, Stanley R.
2501 Meadow Lane
Copperas Cove TX 76522
HARDIN, Philip D.
1022 Narciso Court
San Jose CA 95129
HARP, Charles E.
169 Taft Drive
Clarksville TN 37040
HARPER, Warner A., Jr.
227 Valleygreen Drive
Desoto TX 75115
HAYDEN, Fred R., III
71st Aviation Company
APO New York 09047
HENDRIX, Carl E.
393 E. Kenal
Ft Richardson AK 99505
HUBARD, Edmund W.
Vig Grn Rd., 4F Canerbury
Hopkinsville KY 42240

PCS — CW2'S

HUNT, Donald K.
23d Aviation Det
APO San Francisco 96331
JOHNSON, Junior R.
95-086 Kuahelani Avenue
Milliani Town HI 96789
KINGSLEY, Melvin H.
452 Edward Avenue
Manteca CA 95336
KUSCHEL, Robert A.
11013 Lloyd Dr., Apt 11
Worth IL 60482
LANCASTER, John E.
7 East-Side Manor, Rt4
Taylors SC 29687
LEWIS, David E.
428-D Fenwick Road
Ft Monroe VA 23651
LITTLE, John L.
403 North Martin
Warren AR 71671
LORD, Emory S.
D Trp, 3/8th Cavalry
APO New York 09185
MANGINI, Paul
Ridgewood Hills, Apt 21
Deep River CT 06417
MARCHANT, Charles D.
CMR 2, Box 5275
Ft Rucker AL 36360
MAETINEZ, Arnulfo, Jr.
1811 East 57th Street
Savannah GA 31404
McFARLAND, Robert L.
3 Meadow Drive
Daleville AL 36322
MITCHELL, Harry E.
Rt 9, 502 Britton Sp Rd
Clarksville TN 37040
OLDHAM, William E.
242d Avn Co (ASH)
APO Seattle 98731
PAISLEY, James H.
5448-D Brett Drive
Ft Knox KY 40121
PERCLE, Clinton J.
Christopher Sq., Apt 26
Radcliff KY 40160
ROBINSON, John H., Jr.
295th Aviation Co (HH)
APO New York 09185
SEHL, James H., Jr.
235-B Lower Brick Row
Ft Riley KS 66442
SPENCER, Robert G.
10534 Arnold
Ft Bliss TX 79908
STASZCZUK, S.R.
298 Dixie Dr., Apt B-1
Enterprise AL 36330
STOEHR, Bruce E.
8710 Hayshad La., Apt 202
Columbia MD 21045
TAGLIERI, Altimore N.
94-108 Hokuall Ct. #124
Milliani Town HI 96789
TEMPLEIN, James A.
AIR Troop, 11th ACR
APO New York 09146

PCS — CW2'S

TOMEI, George J.
1412 Suwanee Road
Daytona Beach FL 32014
TONELLI, James D.R.
36 Susan Avenue
So Hadley MA 01075
VANDERBOSCH, Lee E.
1133 McCarley Drive, W.
Columbus OH 43228
WENDT, Peter C.
3632-A Porter Loop
APO San Francisco 96557
WHITE, Dennis E.
5486 Jameson
Ft Knox KY 40121
WHITE, James M.
222-B Dyer Circle
Redstone Arsenal AL 35808
WHITE, Robert J.
HHC, 3d Bde, 3d Inf Div
APO New York 09162
WICKS, Williams
2445 Lytle Road
Bethel Pk PA 15102
WILLIAMS, John E.
5650 N.W. Dearborn
Lawton OK 73501
WINTERS, Walter R.
13213 E. Bethany Place
Denver CO 80232
WOODS, Donald E.
451 Dela Vina Av., Apt 101
Monterey CA 93940
YORK, Norman E.
71st Avn Co (AH), Box 1
APO New York 09047
YOUNG, Dale E.
590 Maint Co (Acft)
APO New York 09825

WO'S

BLANTON, Thomas
HHT, 2/2d ACR
APO New York 09139
CAHILL, Thomas I.
1522-B Werner Park
Ft Campbell KY 42223
CANNON, Joseph E.
P.O. Box 2181
Ft Benning GA 31905
CLARK, Randall
444 Lunallio Home Rd.503
Honolulu HI 96825
COOK, Charles E.
Post Locator
Ft Rucker AL 36360
CRAIN, Richard L.
1507 Converse Avenue
Fayetteville NC 28303
CUNNINGHAM, Albert W.
1008-B Kessler Court
Ft Benning GA 31905
FERGUSON, Corey J.
P.O. Box 5428
Ft Hood TX 76544
FONNER, Michael H.
Bx 1325, New Garden Sta
Ft Knox KY 40121

PCS — WO'S

JONES, Richard I.
211 Part Street, Apt 1
Burlington VT 05401
LOCKE, Thomas W.
148-A Kessler Drive
Ft Benning GA 31905
MISKIMON, Arthur J.
7348-A Gardner Hills
Ft Campbell KY 42223
MOORE, Jackie L.
1208-B Werner Park
Ft Campbell KY 42223
MOROS, Alberto L.
Briar Circle, Apt 18C
Fayetteville NC 28306
PAIT, Craven
7816 Oakridge Drive, SW
Tacoma WA 98498
PATTON, Larry D.
5631-2 Lockridge Loop
Ft Hood TX 76544
SCHNEIDER, Gregory
Route 2, Box 56
Manhattan KS 66502
SHEA, Patrick O.
1495 Ohio Avenue, N.E.
St Petersburg FL 33703
THOMPSON, John R.
2116 Circle Drive
Copperas Cove TX 76522
UMALL, Rogel
3561 Hilton Ave., #B26
Columbus GA 31904
VANKE, Richard A.
1223-B Kings Mt.Court
Columbus GA 31907
VER HAAR, Burris W., III
C Trp, 3/4th Cavalry
APO San Francisco 96225
WOLPERT, Joel L.
108 Paulette Court
Hopkinsville KY 42240

ENLISTED

BAYER, Peter R., SP5
18 Sheridan
Ft Rucker AL 36360
BUSICK, Billy W., SSG
542d Trans Co
Ft McClellan AL 36201
FARR, Tommy W., SGT
7116 Garza Street
Ft Worth TX 76116
GUSTAFSON, Brian, SP5
2125 Grant
Bettendorf IA 52722
HARRIS, William S., SP5
4302 22d Avenue, West
Bradenton FL 33508
HEATH, Halmer J., CSM
6927 Plainfield Road
Columbia SC 29206
HUCKABY, Marshall, SGT
30 Dunn Drive
Ft Rucker AL 36360
KUNIMURA, D.T., 1SG
35 Sheridan Street
Ft Rucker AL 36360
LASPINA, Jeffery M., SP4
2110 Viva Desse Drive
Campbell CA 95008
LAWRY, Christopher, PFC
3075 Nearlie Place
Gresham OR 97030
LEIGHTON, Malcolm, 1SG
Lot 26G Woodhaven MHP
Ft Campbell KY 42223
PILE, James R., SSG
61 Dunn Drive
Ft Rucker AL 36360
PRICKETT, Howard, SFC
1009 Fairchild
Sun Prairie WI 53590
SHAVER, Edward M., SFC
5011B Hammond Height
Ft Campbell KY 42223



"CH-54 HEIDELBERG" — Lord Mayor Herr Rheinhold Zuen-
del (right) recently christened a CH-54 Skycrane belonging to
the 295th Aviation Co. of Finthen Airbase near Mainz. Also
standing by were (from left) COL Thorvald Torgersen, CO of the
11th Aviation Group, and MAJ Jerry Varnon of the 295th Avia-
tion Company.

PCS — ENLISTED

SZYMECZEK, L.D., MSG
1264 Cushman Drive
Sierra Vista AZ 85635
WELLMAN, Michael, PFC
2506 E. Portland
Phoenix AZ 85006
WOZNIAK, Leon S., MSG
23rd Aviation Det
APO San Francisco 96331

RETIRED

ALLEN, William M., COL
102 Bow Street
Freeport ME 04032
ASCHOFF, John F., Jr. LTC
1010 Bal Harbour Drive
Apollo Beach FL 33570
BAILEY, William J., CW2
P.O. Box 260
Piedmont SC 29673
BAL, Roscius I., LTC
P.O. Box 1425
New Smyrna Bch FL 32069
BARRETT, Ernest F., COL
R.F.D. 1
Hornersville MO 63855
BASIC, Nick J., LTC
8000 State Hwy 85 So., T21
Riverdale GA 30274
BOYDSTON, Arland, LTC
Box R-RHI
APO New York 09205
CABELL, Derosey C., COL
Box R-BHI
APO New York 09205
CARROLL, John E., MAJ
R-RHI
APO New York 09205
CARTWRIGHT, Alvin, LTC
1505 Coolwater Dr., #101
Tampa FL 33603
CHAMBERS, Stanley, MAJ
3751 W. Shangri La Drive
Phoenix AZ 85019
CRANFORD, Jack, COL
Box 552
Isfahan, Iran
DRUCKENMILLER, P. Mesg
590 Ridge Street
Emmaus PA 18049
GUION, James L., LTC
601 W. Kingston Lane
Virginia Bch VA 23452
HALL, James, MAJ
Box R-BHI
APO New York 09205

PCS — RETIRED

HILL, Jack D., LTC
101 Lakewood Drive
Enterprise AL 36330
HIX, William J., LTC
501 Joseph Drive
Ozark AL 36360
LANGLOIS, Arthur R., LTC
Box R-BHI
APO New York 09205
LINDHOLM, James, LTC
1303 Borak Lane
Bryan TX 77801
MEADER, J.C., Jr., LTC
Box 316
Cornwall NY 12520
MILLER, James E., LTC
5614 Wivelly Drive
Columbus GA 31904
NOLAND, Clifton M., LTC
P.O. Box 245
Azle TX 76020
PREMO, Howard L., MAJ
37945 30th Street, East
Palmdale CA 93550
REISACHER, Robt. W., COL
522 Acequia Madre
Santa Fe NM 87501
RICE, Marlon, COL
886 Sunset Avenue
Evansville IN 47708
SMALL, Leonard E., MAJ
410-C Hidden Brook Dr.
Glen Burnie MD 21061
SNYDER, Harold R., LTC
P.O. Box 1464
Reno NV 89502
THOMAS, John W., COL
Box R-BHI
APO New York 09205
THOMPSON, Kenneth, LTC
509 Union Street
Brunswick GA 31520
TIEMANN, Floyd J., LTC
10640 Vista Alegre
El Paso TX 79935
TILLERY, Samuel E., LTC
Box 1130
APO San Francisco 96355
VERTRES, Carl R., CW4
P.O. Box R-BHI
APO New York 09205
WESTER, Billy L., CWO
1156 Racine
Aurora CO 80011
WIRTHLIN, Floyd R., LTC
Box 294
Battle Mtn NV 89820

ASSOCIATES

BARKLEY, Mark E.
4106 Dressell Avenue
St Louis MO 63120
BAUGHMAN, Lynn D.
52260 West Nine Mile
Northville MI 48162
BOX, Beal
LTV, P.O. Box 5907
Dallas TX 75222
CARMODY, Russell D.
427 Vasquez Ave., #1
San Jose CA 94086
COHEN, Asher
4331 Segura Court, North
Ft Worth TX 76132
DEAM, B. Bruce
100 N. Whisman Road
Mountain View CA 94040
DOUGLAS, Robert G.
4331 Segura Court, North
Ft Worth TX 76132
DOUGLAS, P.O. Box 221
Holmdel NJ 07733
EBEL, William E., Mrs.
6928 Sunrise Drive
Panama City Bch FL 32401
FISCHER, Alf S.
P.O. Box 296
Seaford VA 23428
FISHER, Raymond W.
367 Kaymar Drive
Tonawanda NY 14150
FORSTER, William G.
98 Ocean Avenue
Milford CT 06460
GIDNEY, Robert N., Mrs.
2357 Kelton Avenue
Los Angeles CA 90064
GRANT, Kirby
R2-2822 Allerton Circle
Sanford FL 32771
HACKLER, Martha J., Mrs.
Route 5, Box 295
Hattiesburg MO 39401
HILL, Robert W.
1438 East Elm St., Apt 16
Springfield MO 65802
HOLASEK, Ronald S.
23809 Sylvan Street
Woodland Hills CA 91364
HOLGATE, Clifford W.
Harmony & Birch Drive
Mickleton NJ 08056
HOWARD, Jean Ross, Ms
1725 Desales St., Ste 700
Washington DC 20036
HUNTER, J. Ross
1139 Olive St., Suite 500
St Louis MO 63101
JACKSON, Golden K.
6807 Hill Peak Court
Louisville KY 40214
KAUFMAN, Lesco G., Mrs.
245 S.E. Fabian Road
N.Pt Charlotte FL 33595
KEREKES, Joseph
220 Well Street
Fairbanks AK 99701
KLEIN, R.P.
1800 N. Kent St., Suite 1120
Arlington VA 22209

PCS — ASSOCIATES

LEVINE, Donald S.
121 Monmouth Parkway
W. Long Branch NJ 07764
LOFTIS, Steven C.
Rural Route 2
Herman NB 68029
MANN, Forbes
1155 15th Street
Washington DC 20005
McLARNY, Patrick E.
7214 138th Place, N.E.
Redmond WA 98052
NEELY, Harold L.
354 Warrington
Hampton VA 23669
PEJEAU, R.A.
1800 N. Kent St., Suite 1120
Arlington VA 22209
PETERSON, Kenneth R.
42450 Somerset Court
Plymouth MI 48170
PLEASANT, Gaylon L.
2112 Reefer
Arlington TX 76010
RICHARDSON, Gerald A.
11036 Kingsley Rd., #2021
Dallas TX 75238
ROSS, Alexander
P.O. Box 12-1631
Tehran, Iran
RUSSO, Neil N.
8670 Lozen
Sterling Hts MI 48078
SCHROEDER, Dale A.
558 Woodhill Drive
St Paul MN 55113
SCHUBERT, U.L.
3838 Mainsail Circle
Westlake Vlg CA 91360
SMITH, Russell E.
545 Greenbrier Drive
Oceanside CA 92054
SOESTMEYER, C.K.
Michaelstrasse 4B, Bonn
Bad Godesbg. W. Germany
SOLTES, Charles R.
540 Cumberland Avenue
Teaneck NJ 07666
STANFORD, Cleo C.
230 Wasp
Corpus Christi TX 78412
STRAVATO, A.G., Jr.
2222 So. Hayden Street
Amarillo TX 79109
TODOROFF, Alexander G.
Hughes, Centinela & Teale
Culver City CA 90230
WHEAT, Carolyn B., Mrs.
16950 Mitchell Avenue
Monument CO 80132
WILLOUGHBY, Donald E.
3421 Kent St., #602
St Paul MN 55112
ZUEST, Harro
2208-A Wheeler Avenue
Killeen TX 76541
ZULLO, Ugo
12 Stanley Drive
Seymour CT 06483

Question for the Month:

WHY DOESN'T THE ARMY FIELD A TEAM OR
TEAMS IN THE ANNUAL WORLD HELICOPTER
CHAMPIONSHIP?

The answer next month.

(The following Annual Report to the Membership was presented by Major General Delk M. Oden, Ret., AAAAA National President, to the assembled Delegates and Members in attendance at the 17 October 1973 Open General Membership Meeting at the Shoreham Hotel, Washington, D.C.)

INDIVIDUAL MEMBERS

As at 1 October, AAAAA individual members stood at 10,359. This represents a loss of 1,140 members from the previous 1 October, or in terms of percentage, exactly 11% of our total October, 1972 membership.

The bulk of our membership loss was in the two categories of Aviation Warrant Officer and Department of the Army Civilian.

INDUSTRY MEMBERS

At present, there are thirty-six (36) firms that hold Industry (Corporate) Membership in AAAAA, a category of membership involving twelve or more individual memberships.

This represents a loss of five industry firms from the previous year. The losses included Hayes, International, Lear Siegler, McDonnell Douglas, Martin Marietta, and Southern Airways of Atlanta.

CHAPTER STRUCTURE

Four new Chapters were activated during the October 1972-October 1973 period.



General Creighton W. Abrams, Jr. (left), Army Chief of Staff; MG Delk M. Oden, Ret., AAAAA National President; and Senator Strom Thurmond at the '73 AAAAA Honors Luncheon.

AAAA President's '72-'73

Annual Report

These were the Taunus (Frankfurt) Chapter, the North Star (Minneapolis-St. Paul) Chapter, the Sooner Chapter located at Norman, Okla., and the "Persia" Chapter which I had the privilege of joining two months ago in Tehran.

Chapter losses? Yes, we had them. The Fort Wolters Chapter has been deactivated, as has the Coastal Empire Chapter embracing Hunter and Fort Stewart.

The Golden Gate Chapter was deactivated when its entire slate went PCS and no members rose to assume the chapter's leadership. Lastly, the Suncoast Chapter at Tampa, Fla. was deactivated in the absence of an effective slate of officers.

In the Chapter organization area then, we had a standoff . . . Four new ones . . . Four lapses.

FISCAL AFFAIRS

The Association's fiscal year covers the 1 April-31 March period with semi-annual reports on 1 April and 1 October. Our Secretary-Treasurer is Ed Nielsen, and I'm going to have Ed provide a separate report to you in just a moment.

I'd like to say that your Ass'n has an active Fiscal Committee that meets regularly and closely audits the receipts and expenditures of the Association. I had the opportunity to sit in on such a meeting prior to my leaving for Tehran, and the discussion and review were highly detailed.

For those of you who are interested in knowing how the Ass'n has fared fiscally over the long haul, the National Office has provided copies of a fourteen-year fiscal summary, providing receipt and disburse-

REPORT/Cont. from Page 33

ment comparisons in all major areas on one sheet. Copies of this 14-year summary have been placed at a table to my right and are yours to review.

GOVERNMENT

AAAA's National Executive Board met three times in the past year . . . in February, the Board met at the time of an AOA-AAAA Co-Sponsored Advance Planning Briefing for Industry in St. Louis. It conducted its two-day meeting prior to the start of the APBI.

In August, the Board met in Washington, D.C., timing its meeting to coincide with that of the AAAA National Awards Committee which met at the time to select the AAAA National Award Winners whom you'll meet tomorrow, and who will be honored in ceremonies on Friday.

This time — and I'm ashamed to say this — in my absence the Board concluded its business in one day with Brigadier General "Spec" Powell, our Senior Vice President, presiding.

This afternoon, tomorrow, and Friday the Board will again meet to cover Ass'n business. Our meeting today has been scheduled to follow this meeting so that we may have the benefit of responding to such member requests as may be generated later at this open meeting.

BOARD SERVICE

I've served on the national board for quite a few years, and have handled the money for a while as Treasurer; served as

THREE REGIONS ACTIVATED

Following membership proposals made at the 1973 Convention, the AAAA has activated three Regions within CONUS tied to the Army Areas. Accepting initial two-year appointments by COL Edward L. Nielsen, Ret., National President, are MG William J. Maddox, Jr., President of the First Army AAAA Region and MG James F. Hamlet, President of the Sixth Army Region. The Region Presidents will serve on the National Executive Board in place of some 5-6 National Members-at-Large.

REPORT OF AUDIT

COL Edward L. Nielsen, USA (Ret.), the Secretary-Treasurer of AAAA and the Chairman of its Fiscal Committee, provided the following 31 March 1973 report of audit on Association finances at the 17 October General Membership Meeting at the Convention:

Total Assets	\$ 63,300
Total Liabilities	\$ 27,600
Total General Fund	\$ 35,700
Total Receipts, 1972-1973	\$100,290
Total Disbursements	\$ 92,480
Excess of Receipts ('72-'73)	\$ 7,810

Senior Vice President under Harry Kinnard; and then served as your President this past year.

I can truthfully say the Board members approach their duties conscientiously, and devote many, many hours to the various programs and activities of Quad-A and do this in your interest. They do this unselfishly, and often at considerable expense to themselves.

COMMITTEE STRUCTURE

The 12-member Awards Committee chaired by Brigadier General "Bob" Leich met on two occasions. It held its AAAA Scholarship Selection meeting in Washington, D.C. in the spring, and then on 18 August it met again in Washington to select the AAAA National Award Winners. An "Army Aviation Hall of Fame" Subcommittee met in September, and selected nominees for 1974 election to the Hall of Fame.

Your By-Laws and Legal Committee meets in Washington whenever needed and reviews the various proposals to amend the By-Laws. This committee is chaired by Brigadier General Glenn Goodhand.

The AAAA's Convention Committee met in Washington on two occasions prior to this year's convention. The committee met at the call of Art Kesten who serves as General Chairman for our conventions.

I've already mentioned Ed Nielsen, our Secretary-Treasurer. Ed chairs a five-member Fiscal Committee and works closely with Abner Bobo, the Ass'n accountant whose business office is located in the Philadelphia area.

There is no Industry Affairs Committee as such, but shortly will be. "Cliff" Kalista

has served as my V.P. for Industrial Affairs, and has given Art Kesten interim guidance whenever he's needed it.

We do not have a working Junior Officer-Warrant Officer Committee or Council at the national level at present, but have always had several Warrant Officers on the Board in my five years of Board service, and several company grade officers who have doubled as Chapter Presidents. Captain Radcliffe, as many of his "Aviator of the Year" predecessors, serves on the Board as an appointed National Member-at-Large during the year following his selection as "AA of the Year."

Early tomorrow evening, the Board will meet prior to the "President's Reception" and the incumbents will elect from among their own number those members who'll fill the various elective offices for the 1973-1974 term.

You'll have an opportunity to meet your new National President and his wife at the "President's Reception" tomorrow night. The receiving line also includes the Director of Army Aviation and the Executive Vice President of the Ass'n and their wives, and myself. Please understand the receiving line is a friendly one! . . . It's not mandatory. If you have a moment, we'd like to say "hello" to you . . . if not, enjoy yourself at this fine reception.

MEMBERSHIP ENROLLMENT

Until recently our Membership Enrollment Committee was chaired by CW4 Don Joyce, a most active member of this board. I'm sorry to say that Don resigned from the board for personal, professional, and fiscal reasons a month or so ago, and we'll miss his interest and enthusiasm at the national level considerably.

One of the prime tasks facing your next President will be the appointment of a dynamic Membership Enrollment Chairman, one who has the same enthusiasm for the job that Don had. (Ed. Note: Bigadier General Jack Hemingway, Ret., of Killeen, Tex., has been appointed as the new National Membership Enrollment Chairman.)

Our Nominations Committee worked

overtime this year. Chaired by "Harry" Kinnard as the immediate Past President, the Committee selected six nominees for the vacancies existing in the elective offices of the Board. I'll ask General Kinnard to address this subject in a few moments.

We have a six-member Publications Committee chaired by Don Luce that concerns itself with the advertising placed in our Ass'n-endorsed magazine. I firmly believe — as my predecessors did — that the health of our Ass'n is tied largely to the health of the magazine. Increased advertising is the only thing that will return a larger and better publication; our dues receipts are fully committed to the administration of our many Association programs, other than the magazine.

Reserve Component Affairs . . . We do not have a formal committee but look who we have on our Board:

For guidance, there's MG Fran Greenlief, the chief of the National Guard Bureau. Backing him up is Major General "Jim" Smith, who commands the Reserve Readiness Region with HQs in Chicago. These gentlemen have attended our Board meetings religiously and have jumped into the discussion whenever inter-component matters are discussed.

SCHOLARSHIP FOUNDATION

The AAAA Scholarship Foundation is a separate corporation that maintains close ties with the AAAA. Concerned with all aspects of the AAAA Scholarship Program, the Foundation is directed by a six-member Board of Governors with Bryce Wilson serving as its President.

The inside back cover of your "Convention Issue" announces that \$4,000.00 in scholarship aid is available for 1974 use, and covers the Foundation's award output since the start of the program in 1965.

I've briefly covered our membership status, both Individual and Corporate . . . and I've reported to you on the chapter activity structure. Lastly, I've given you a quick look at the inner workings of AAAA — the all-volunteer committees who serve you at the national level.

REPORT /Cont. from Page 35

Under the AAAA's staggered system of elections, three or four of the ten AAAA elective offices normally are vacated each year. This leaves the 6-7 incumbents, and the Past Presidents, plus the Regional and Chapter Members-at-Large then in office to provide continuity to AAAA affairs as the elective offices are filled with newcomers.

That's a poor word . . . Newcomers . . . No one really is a newcomer to the National Board, one of the criteria for nomination being past AAAA service and interest.

This year, the terms of Wayne Smith, Brigadier General "Spec" Powell, and CW4 Bob Hamilton expire with this Convention. Brigadier General "Mike" Lynch is in the process of retiring from the service and has indicated that he cannot, in his new position, serve his remaining year in office, and as I previously mentioned, CW4 Don Joyce resigned. That creates five vacancies in all.

I created the sixth. While I still have two years to serve on the Board, I felt that I could not do so in any executive capacity while based in Tehran and have opted for a Past President status.

Six vacancies constitute virtually a new elective slate. Only Cliff Kalista, Ed Nielsen, and Colonels John Marr and John Geary are on hand to carry over in the elective offices of the Board, and two of these four

gentlemen have just completed their first year in office.

I inject this for the phrase, "new blood," is quite appropriate. We have "new blood" on the board and more "new blood" joining the Board.

The selection of candidates has always been the subject of careful consideration by our Nominations Committee and I ask your immediate Past President and Nominations Committee Chairman, General Kinnard, to come forward and make his report.

I would add, as a point of information, that AAAA's National Nominations Committee is composed of the Past Presidents of the Ass'n, of which there are seven, the incumbent President, and the Executive Vice President.

MEMBERSHIP SURVEY

Shortly after last year's Convention, the National Office conducted an extensive post-convention evaluation. A multi-question form queried the 179 Delegates and 38 National Board members in attendance on hotel service and facilities, food service, professional presentations, quad-a activities, and social activities and receptions. . . The fallout was most illuminating. More than two-thirds of those polled returned their questionnaires, and a preponderance of those responding asked for two changes:

- 1) Program revision to enable attendees to visit the AUSA-Industry aerospace exhibits, and
- 2) Additional time to discuss AAAA organizational matters as delegates and alternates.

Today's program is devoted to covering these two areas. The General Chairman, on approval of the Board, expanded the AAAA National Convention to a 2½ day program, permitting this full day for open discussion periods, an opportunity to visit the AUSA-Industry exhibits, and a late afternoon report-back session.

The board is at your disposal. There are many, many key aviation officers in the audience. For a starter, I would like to hear some Delegate viewpoints on the AAAA's conduct of a Nat'l Convention at a non D.C. area.

NOMINEES



Wright



Hemingway



Cribbins



Perry



Hamilton



Luce

"AFTER ACTION REPORT"
1973
AAAA NATIONAL
CONVENTION
WASHINGTON, D.C.



Too to see during pre-Membership Luncheon cocktails



GEN Abrams at Honors Luncheon



ODCSPEK's Fern talks on flight pay



Guardsmen view survival equipment at safety conference



McKeown Wilson and Condon Chapter Scholarship award



Junior Officer Warrant Officer Delegates check sign ins



Russian technology briefing draws widespread applause



President Oden at Q&A session



BG Khorvordad talks on Iran R/W



"Miss AVSCOM" draws winning Nat'l Sweepstakes' ticket



AAAA Industry Member Luncheon and two-tier head table



Self Introduction: COL Richardson, USAAVNC president



"Soldier of Year" Vaughan meets BG and Mrs. Merryman



AWD Branch Chief fields a question



1973 AAAA NATIONAL CONVENTION



Wives of award winners with Mrs. Nelson at Ladies Brunch



NAF Board meets in mid-convention business session



Program chief MG Maddox and seven Oct. 17 speakers



Audience of 450 hears opening AAAA professional session



BG Cockerham gives AAN update



MG Shoemaker quizzes a panelist



Ethyl Heickman, proxy for the Richard Ritter president



Jack Ruby repeats "I headstand" on Luncheon head table



Chapter Delegates and Members hear the Annual Report



ODCSPER's MG George Putnam chairs Personnel Panel



Twosome: MG Oden, Sen. Thurmond



BG Turner: UTAS progress report



BG "Jim" Merryman, the Lucases, and a photogenic friend



Del Bristol speaks for continuing the D.C. Convention site

AAAA Activities

LINDBERGH CHAPTER. Pre-holiday dinner-dance: dinner, dancing and fun at the Stadium Club. 1830-2430 hours. 16 November.

TAUNUS CHAPTER. After-dinner professional meeting with the AAAA Convention the topic of LTC Edward A. Bauerbrand, Jr. and CPT Robert Hase covering the '74 USAREUR Regional Convention in the Squire's Room, Drake OOM, Frankfurt, Germany at 1900 hours, 28 November.

ALAMO CHAPTER. Annual Aviation Party with cocktails, dinner and dancing at the Fort Sam Houston Officer's Club at 1900 hours, 30 November.

LATIN AMERICA CHAPTER. Professional meeting with several presentations including a report on the highlights of the '73 AAAA Convention by delegates in the American Room, Ft. Amador OOM, at 1530 hours, 30 November.

MISSISSIPPI VALLEY CHAPTER. Christmas Party with cocktails, dinner, and dancing at the Ramada Inn from 1830-2400 hours, 30 November.

SHARPE ARMY DEPOT CHAPTER. General membership meeting with a report on the '73 AAAA Convention and a discussion of the '74 chapter program in the SHAD O-CLUB at 1630 hours, 30 November.

FORT HOOD CHAPTER. Professional luncheon meeting with LTG Allen M. Burdett, Jr., the guest speaker on 3 December. Members only.

DELAWARE VALLEY CHAPTER. Professional dinner meeting with Ralph P. Alex's topic, the

"Second World Helicopter Championship", at the Airport Holiday Inn, 1800 hours, on 5 December.

PERSIAN CHAPTER. Professional dinner meeting with MG Delk M. Oden, Ret. and COL "Bob" Bonifacio covering the highlights of the recent AAAA National Convention in the USAFOOM at 1900 hours, 6 December.

GREATER CHICAGO AREA CHAPTER. Annual Winter Dinner-Dance at the Chicago Ambassador Hotel, Three Georges Room, 7 December.

EMBRY-RIDDLE CHAPTER. Annual Christmas Ball with cocktails, dinner, guest speaker BG John F. Forrest, entertainment, and dancing at the Daytona Hilton from 1830-0100 on 7 December.

FORT SILL CHAPTER. Professional luncheon meeting with the Boeing UTTAS the topic of Mr. Hogan of the Boeing-Vertol Company, in the Heritage Room, FSOOM from 1130-1300 hours on 7 December.

GREATER CHICAGO AREA. Annual Winter Dinner Dance in the Three Georges Room of the Chicago Ambassador Hotel on 7 December.

MORNING CALM CHAPTER. General Membership and Professional Meeting with GEN Richard G. Stilwell, guest speaker, in the Eighth Army Officer's Club at 2200 hours, 19 December.

DAVID E. CONDON CHAPTER. Professional luncheon meeting with BG Samuel G. Cockerham discussing the AAH program, in the Fort Eustis Officer's Open Mess from 1130-1300 hours on 11 December.

FORT MONROE CHAPTER. Holiday social gathering with cocktails and dinner at the Ft. Monroe Officer's Open Mess Casemate Room from 1830-2000 hours on 19 December.

BONN AREA CHAPTER. Professional dinner meeting with Sergei Sikorsky giving his private comments on Russian helicopter technology at the American Embassy Club in Bad Godesberg, 1900 hours on 20 December.

AAAA-AFCEA-AFMA-AUSA Annual Christmas Dance with cocktails and dinner at the Barclay, Belmont, NJ from 1830 hours on 20 December.

ALOHA CHAPTER. Professional luncheon meeting with a surprise guest speaker updating members on the '73 Convention and new Association programs for CY 74 at the Wheeler Officers Club, 1130 hours on 21 December.

WASHINGTON, D.C. CHAPTER. Annual Christmas Cocktail Party at the Ft. Myers Officers Club from 1900-2100 hours on 28 December.

GARMISCH CHAPTER. USAREUR AAA CONFERENCE including Ski-Week at the U.S. Forces Recreation Area in Garmisch. Special activities and events for members only in addition to the convention business meetings, from 1200 hours, 17 February, to 24 February.

CLASSIFIED ADVERTISEMENTS

Rate: Address (Name or Box No., Street, City, State, Zip Code), \$4.00, plus \$0.60 per word in body copy, payable in advance of each insertion to ARMY AVIATION, 1 Crestwood Road, Westport CT 06880. Minimum insertion, ten words. Closing date is the 8th of the month preceding the date of issue.

WANTED. FLIGHT INSTRUCTORS to teach helicopter primary, contact and instrument flight training. FAA Commercial Pilot (Helicopter). 1,000 hours total time; 500 hours helicopter time; 250 hours helicopter instruction; must be able to pass U.S. Army Class II Flight Physical. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin. DOSS AVIATION, P.O. Box 725, Fort Rucker, Ala. 36360. Phone (205) 255-6556.



DECALS 20¢ each

Free catalog Army Aviation supplies

CONARV Associates P.O. Box 131 Cheshire, Conn. 06410



1973 QUAD-A CONVENTION SNAPSHOTS



MG "Bill" Maddox covers a point in the open session



... and a member raises another question for Quad A.



President Nielsen taken over AAAA reins



The Merrymans greet AAAA guests



"Now about this agenda item..."



GEN Abrams meets President Ed Nielsen



MG Greenleaf, NGB Chief, at ARNG meet



Regency Ballroom scene. AAAA members in meeting.



"I'd like to get a response to this particular question."



BG Goodhand outlines change to By Laws



A professional M.C. - LTJ Kinard



LTJ Burdett, Rogers, and Deane



After hours romance: The Mike Mahones



AAAA FOUNDATION OFFERS \$4,000 IN SCHOLARSHIP AID

The AAAA Scholarship Foundation announces the availability of \$4,000 in 1974 scholarship assistance funds for the sons and daughters of members and deceased members with an effective date of membership on or before March 31, 1973.

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, 1974 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 31, 1973; (2) a high school graduate or senior who has made application to an accredited college or university for Fall, 1974 entrance as a freshman, or who has been accredited for freshman enrollment in the Fall of 1974; 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, 1974, with the winners to be notified not later than April 15, 1974.

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 1973, the Foundation has furnished \$40,900 in direct aid to 133 children of members or deceased members since the program's start in 1963.



Paul Hendrickson, I., and Don Luce, r., accept 'Best Meeting Program Award' for the St. Louis Lindbergh Chapter activity.



Awards Chairman 'Bob' Leich presents AAAA plaques to Sikorsky's Ralph Alex, I., and Boeing's Jack McMinn, r., for their efforts supporting professional activities in chapters.



LTC Ronald C. Perry, TENNKY Chapter Exec V.P., accepts the 'Largest Percentage Increase in Chapter Membership' plaque for '72-'73 for the Fort Campbell AAAA members.



MG Delk M. Oden, I., presents an AAAA Honorary Membership to BG John F. Forrest, Director, Off. Personnel Directorate.



CW3 Harold Simpson, USAREUR Delegate, accepts 'Most Unique Chapter Meeting Award' for Taunus Chapter members.



COL 'Bill' McKeown, Condon President, receives an AAAA Scholarship Foundation award from BG Bob Leich as Bryce Wilson, Foundation President, r., observes the ceremony.



NEWLY-APPOINTED — CW3 Albert J. Ladesic, Jr., left, receives from Major General William J. Maddox, Jr., commander of Ft. Rucker, Ala., the insignia of his new position as junior aide-de-camp for the two-star general officer. CW3 Ladesic has been a command pilot at the U.S. Army Aviation School since September. (AP)



THE GRADUATE — PVT Linda K. Plock, left, the first woman to become an Army helicopter mechanic, is congratulated on her December graduation by LTC Doris Caldwell, chief, WAC Recruiter Tag Division. A Lincoln, Nebr. enlistee, PVT Plock attained a 98 percent average during USAAVNS tng.



FAST! — Marking the first time local Cobra transition training has been given at Ft. Hood in three years, COL Charles Canedy, center, new commander of the 1st Cav Division's 2nd Brigade, completed his check ride after 23+ hours of flight and 39 add'l hours of ground school. CW2 Walter Dietz, left, and CW2 Keith Brown, both of the 162nd Avn Co, were his flight, gunnery, and ground school instructors.



MUSEUM OPENING — Two of the people who helped get the WOC Hall of Fame Museum ready for its formal Ft. Rucker opening ceremonies in December were CPT Marion E. Edwards, Jr., left, the Museum Curator, and WOC John E. Winebarger. Moved from Ft. Wolters, the Museum will be operated by the 6th Battalion ghe Aviation School Brigade. (AP)

The Personal Side

COMMAND & STAFF

Major General John W. McEnery, to Defense Nuclear Agency (DDOA), Washington, D.C. 20305.

Colonel Anthony J. Adessa, to Hqs, 1st Region, ARADCOM, Stewart Field, N.Y. 12550.

Colonel George L. Ball, to U.S. Forces Support District, APO New York 09710.

Colonel Leonard R. Burdick, Hqs, USA Reserve Readiness Region IX, Presidio of San Francisco CA 94129.

Colonel Egbert B. Clark, III, to Hqs, V Corps (G-3), APO New York 09079.

Colonel Benjamin E. Doty, to Hqs, 3d Armored Division Artillery, APO New York 09165.

Colonel Earl W. Fletcher, as Chief of Staff, Project MASSTER, Fort Hood TX 76544.

Colonel George Komar, to Pirmasens Army Depot, APO New York 09138.

Colonel Howard M. Moore, as Chief, Command & Control Group, TAFT, Iran, APO New York 09205.

Colonel Harold B. Van Dyken, to USA Reserve Readiness Region VIII, Rocky Mountain Arsenal CO 80240.

DISTINGUISHED GRADUATES

CROWE — WO1 Ronald H., DG of WORWAC class, USAAVNC, 20 November.

DELVAUX — CPT James L., honor graduate of AMOC 2-74, 6 November.

HARRIS — SP5 William J., DG and winner of the CSM Award for leadership at Basic Air Traffic Control Noncommissioned Officers Education Systems, USAAVNC.

JACOBS — WO1 Harold J. III, DG of WORWAC class, USAAVNC, 4 December.

KOENIG — PFC Nancy L., honor graduate of the Flight Operations Class, USAAVNC.

MARSHALL — LTC Thomas J., MA in International Relations from the University of Oklahoma.

MAYNARD — MAJ Truman, DG of Rotary Wing Qualification Course, USAAVNC.

McKENNA — PFC Mary, DG of Flight Operations Class, USAAVNC.

NASH — CPT William, DG of ORWAC class, USAAVNC, 4 December.

ROBINSON — CPT (Dr.) Michael C., DG of Flight Surgeons Course, USAAVNC.

SCHWINN — PFC Susan K., honor graduate of Flight Operations Class, USAAVNC.

SMITH — 1LT Gregory G., DG of ORWAC class, USAAVNC, 20 November.

WANDELL — PFC Maryann C., honor graduate of Flight Operations Class, USAAVNC.

MEDALS

DeBLOIS — 1LT William A. Jr., Army Commendation Medal.

DILLIONEIR — LTC Willard W., Joint Services Commendation Medal.

DRENNAN — CW2 Lloyd A., Army Commendation Medal.

HILL — LTC Jack D., Legion of Merit.

HOLDEN — 1LT David A., Army Commendation Medal.

KNIPPERS — MAJ Donald R., Meritorious Service Medal.

MORGAN — CW3 John O., Meritorious Service Medal.

NOWICKI — CW2 James E., Distinguished Service Cross.

SCOTT — SSG Frank E., Army Commendation Medal.

WELTER — CPT Robert M., Meritorious Service Medal.

WILCOX — CW2 Michael B., Meritorious Service Medal.

NEW CAREERS

LTC (Ret.) James R. Barkley, Logistics Support Center, Bell Helicopter Co., PO Box 482, Ft. Worth TX 76101.

OBITUARIES

LEWIS W. LEENEY

Colonel Lewis W. Leeney, 58, a veteran aviator who retired in 1966, died Friday, December 7, after a heart attack at his home in Chevy Chase, Md.

A former AMC project officer and national AAAA Treasurer, "Bill" Leeney had recently received a law degree from Catholic University. He leaves his wife, the former Dorothy Simonson, of Leland Street, Chevy Chase, Md.; two sons, W. Joseph, and Jack W.; two daughters, Janet R., and Mrs. Margaret McDonald; and four grandchildren. He was buried at Arlington National Cemetery on December 11.

OLNEY — COL Gregory L. (Ret.), was killed 21 October in a farm accident in Dolliver, IA.

RATINGS

DELVAUX — CPT James L., Senior, Aviator Wings.
DICKEY — CPT Ronald G., Senior, Aviator Wings.

1973 AAAA CONVENTION SNAPSHOTS



General Henry A. Miley, Jr., the commander of AMC, presents a "Special Aviation Unit Award"



AAAA-Foundation leaders are, l-r, back, Kesten; Presidents Goodhand, Kinnard, Gerard, Oden, Wilson, Leich; front, COLs Descoteau, Bristol; MGs - Beatty, Klingenhagen; LTG Seneff. In

back, Kesten; Presidents Goodhand, Kinnard, Gerard, Oden, Wilson, Leich; and Bannister



Chaired by BG James H. Merryman, Director of Army Aviation, a "Hardware Panel" includes BGs LD Turner,

SG Cockerham, and JB Lauer; JP Cribbins; BG JV Mackmull; MG DA Starry; and PF Yaggy.



Major General LaVern E. Weber, Director of the ARNG, is shown, addressing the ARNG attendees



Lieutenant General John J. Hennessy, Chief of Reserve Components, at Honors Luncheon



Hale and hearty, some 32 members of AAAA's splinter organization, the Cub Club gather to refight World War

II after three or four cocktails. The 126 member Drinking Society is limited to World War II Army Liaison Pilots.

THE ADVANCE SCOUT

(Continued from Page 6)

We are already moving to this concept in developing our ground combat vehicles, incidentally.

Another area that we believe demands serious consideration during the development of new systems is that of simultaneous development of maintenance and training simulators. The budgetary constraints which the Army faces now and for the foreseeable future, in our judgment preclude the allocation of significant numbers of vehicles out of an operational fleet into the training base.

Simulators a "must"

Realism that is now available through simulation can greatly reduce the need for operational equipment for training. The aviation industry, as most of you know, and Fort Rucker have led the way in this new approach to training. There simply has to be more of it. Simulation devices must be designed right along with the major end item so as to reach the field hopefully ahead of, but at least concurrently with the new system to allow smooth, rapid, and less costly transition.

We're insisting upon this approach at Ft. Knox in our other vehicle programs, even ground vehicles. We're working now to try to define what I call a transfer function, that is, how much simulation training is transferred to the real item with little or no proficiency loss, and how much of the total procurement can be transferred to simulators to release how many more operational vehicles to the user fleet.

It's mathematically possible within the state of the art but very little has been done on it so far in the context that I'm talking about now.

The urgency of insuring that Armor and the Army get a reconnaissance helicopter that will meet our basic needs is the reason I'm pressing hard to have the advanced reconnaissance helicopter task force sited at Ft. Knox, the home of cavalry. Having most of the Main Battle Tank task force, we have a little expe-

rience in this. We welcome the opportunity to aid in designing this system which we believe is very important to the future of our branch and the future of aviation.

Finally, training. The best, most costly equipment is of little value unless the operator knows and understands how to use it and can get the most from it. We believe that it takes a special type of person to be a scout. This is true in the air and it's true on the ground.

Not every aviator makes a good cavalry aviator, I'm sorry to report to you. Air cavalry aviators are required to earn their pay using more than the normal flying techniques. They have to be masters at handling their aircraft in this unique environment. The air cavalry aviator has to be a master in the art of scouting and scoutcraft; he must fully understand the employment of the weaponry carried by his big brother, the attack helicopter.

A costly approach

In the past we have given this gentleman a basic flying education and we have depended upon his unit to teach him to be an air cavalryman. We believe that this approach is and has been far too costly in both lives and aircraft. I intend to approach *General Maddox* and the Aviation School shortly to ask help in finding and training a few selected aviators to high levels in those skills we believe an air cavalryman needs — skills that will enable him to seek out and find the enemy and to gather the necessary information — and together I believe that we can do just that.

As *General Maddox* pointed out to you a while ago we have an advanced reconnaissance helicopter on paper, and a required operational capabilities document soon to be evaluated by a task force whose purpose it is to provide the Army with the right combination of aircraft and subcomponents. We just have to have this if we are going to move in any new direction.

No one has more at stake in this than Armor and cavalry. Reconnaissance is our life blood so I ask you to join with me in hoping that this task force does its job well.

ONE OF A KIND!

"THE LIONHEADS is the best and truest novel I have read about the Army. It's an Army book, not a war book, and it succeeds admirably. Need I add that it's wonderfully written, as tight and hard as a drum."

—WARD JUST



THE LIONHEADS

BY JOSIAH BUNTING

SECOND LARGE PRINTING — A BOOK-OF-THE-MONTH CLUB ALTERNATE.

"A notable document of war"—Time

"This book is a novel, not a history," writes Major Bunting. At the same time his story reads like a fascinating report by an insider of precisely what goes on in the chain of command from division headquarters down to the "real sharp individual" in combat, the low man on the totem pole. If the primary concern of the troopers is to survive, that of the career officers is usually success in the military system — "getting their tickets punched." Implicit in the story of THE LIONHEADS is a commentary on this situation.

"THE LIONHEADS is the finest novel that has come out of the Vietnam war... a contemporary military classic comparable with James Cozzens' *Guard of Honor*." —Saturday Review Syndicate

"THE LIONHEADS explains more about our involvement in Southeast Asia than all the Pentagon Papers and anti-war diatribes combined." —St. Louis Post Dispatch

"Massively convincing." —N.Y. Times Book Review

"A compelling story, well crafted, tight, spare... as functional as one of those weapons I imagine Major Bunting knows so well how to use." —New York Times

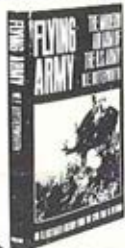
"Reading THE LIONHEADS must be something like 'mainlining' —that is, injecting a drug directly into a vein. Here is the quintessence of the American tragedy in Vietnam written with military precision and the inevitability of Greek tragedy. When you finish THE LIONHEADS you know what went wrong — it was the whole damn system and most particularly the Army itself." —Harrison Salisbury

"I found THE LIONHEADS not only compulsively readable, but especially distinguished by the irony and insight it brings to its exploration of the role of the professional military officer in today's nightmarish warfare." —William Styron

"THE LIONHEADS takes aim at the kind of self-serving and advancement-seeking leadership that now flourishes within the command level of the U.S. Army." —Saturday Review

\$5.95. GEORGE BRAZILLER, NEW YORK, N.Y.

MAY SELECTION



Flying Army

"FLYING ARMY" traces the evolution of Army Aviation from its roots in Thaddeus Lowe's Civil War observation balloon, through its first tottering steps with artillery spotting and liaison aircraft in World War II, through the Korean War, and on to today's highly mobile airborne infantrymen and air cavalry units that have all but replaced the foot soldier of the past. An interesting history, and a "must" item for those who made the history. Covering "The Modern Arm of the U.S. Army," the book's 196 pages are amply illustrated with some 232 photographs.

NO POSTAGE OR HANDLING CHARGES

AIRDALE BOOKS

P.O. Box 276 — Saugatuck Station
Westport, Connecticut 06880

I've enclosed my personal check to cover the postpaid delivery of the book(s) ordered at the right. (Print name clearly).

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

CHECK APPROPRIATE DISCOUNT:

(1 Book-15% Discount; 2 or more Books-20%)

BOOK TITLE	15% DISC.	20% DISC.
"Flying Army" By W. E. Butterworth \$7.95, Doubleday & Co.	<input type="checkbox"/> \$6.75	<input type="checkbox"/> \$6.35
"Army Wife in Germany" By Mollie Oliver Mertel \$3.50, Exposition Press	<input type="checkbox"/> \$2.95	<input type="checkbox"/> \$2.80
"The Lionheads" By Josiah Bunting \$5.95, George Braziller	<input type="checkbox"/> \$5.05	<input type="checkbox"/> \$4.75

1 BOOK-15% DISCOUNT/2 OR MORE-20%

ARMY AVIATION

EDITORIAL AND BUSINESS OFFICES: 1 CRESTWOOD ROAD, WESTPORT, CONN. 06880



Helioplane!

The Bell Model XV-15 takes off vertically in the helicopter mode — heads for the skyways without needing runways.

Once aloft, it turns into a high speed (over 300 KTAS true air-speed), quiet and efficient fixed wing transport.

Bell engineers turned to Avco Lycoming T53 gas turbines for this demonstration vehicle of a new concept in VTOL transports because they knew this engine from its reliable performance aboard hundreds of their Huey choppers the world over.

Proven performance, and power plus — that's a pretty good definition of Avco turbo-shaft and turboprop power.

THE P.O. DOES NOT FORWARD
ISSUES IF YOU CHANGE YOUR
ADDRESS! TO RECEIVE ISSUES,
SUBMIT A "CHANGE" NOTICE!


LYCOMING DIVISION

STRATFORD, CONNECTICUT 06497