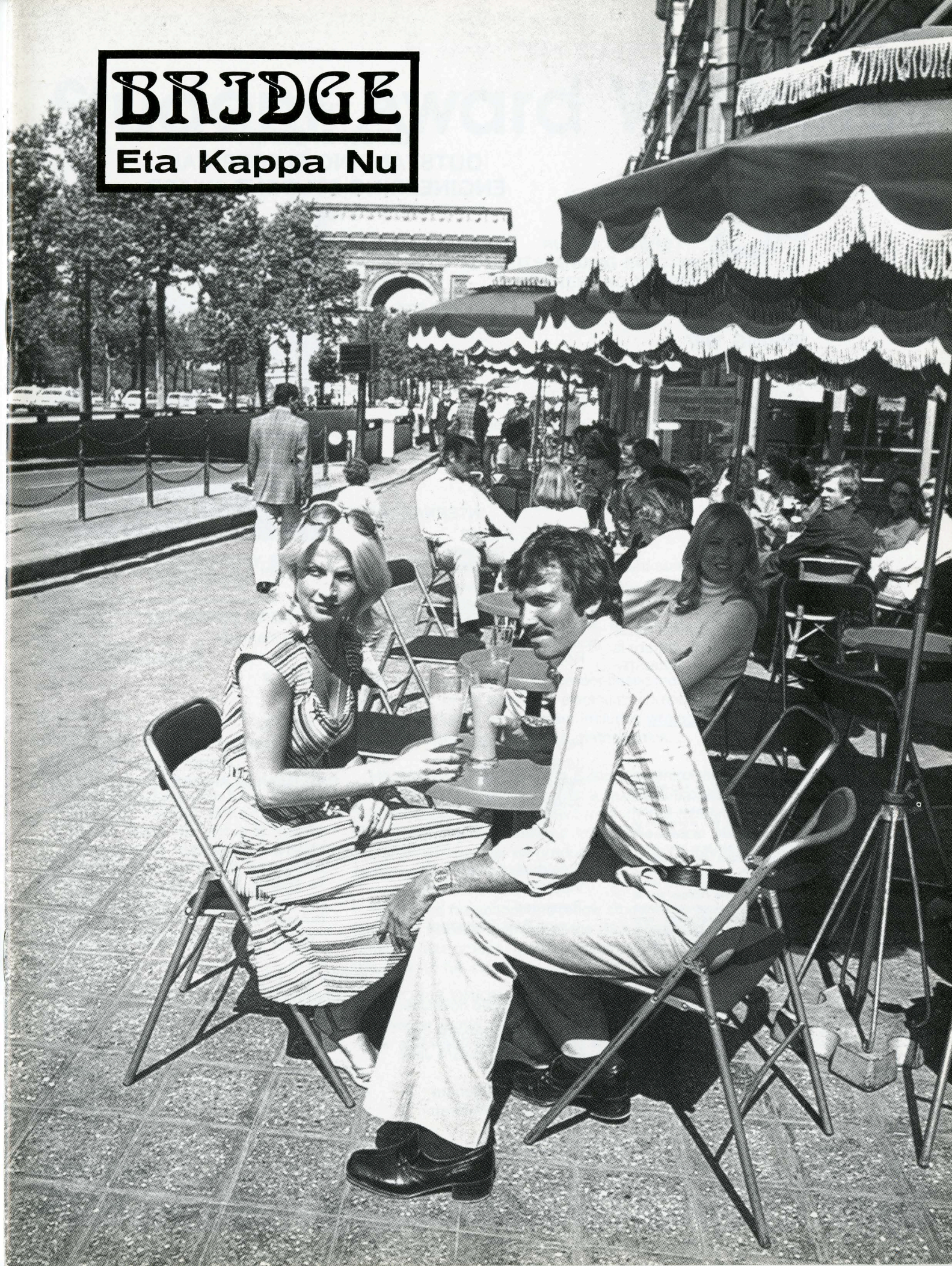
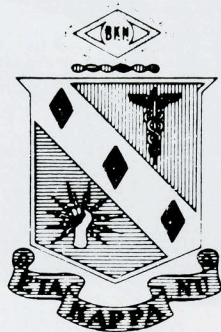


# BRIDGE

Eta Kappa Nu





Editor and Business Manager  
Paul K. Hudson

**SPRING 1987**  
**Vol. 83—No. 3**

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**Howard Sheppard**  
**George Swenson**

THE COVER—Springtime starts the vacation season. Shown here is a sidewalk cafe on the Champs-Elysees. See page 13

The BRIDGE is published by the Eta Kappa Nu Association, an electrical engineering honor society. Eta Kappa Nu was founded at the University of Illinois, Urbana, October 28, 1904, that those in the profession of electrical engineering, who, by their attainments in college or in practice, have manifested a deep interest and marked ability in their chosen life work, may be brought into closer union so as to foster a spirit of liberal culture in the engineering colleges and to mark in an outstanding manner those who, as students in electrical engineering, have conferred honor on their Alma Maters by distinguished scholarship activities, leadership and exemplary character and to help these students progress by association with alumni who have attained prominence

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## THE ALTON B. ZERBY OUTSTANDING ELECTRICAL ENGINEERING STUDENT AWARD 1986

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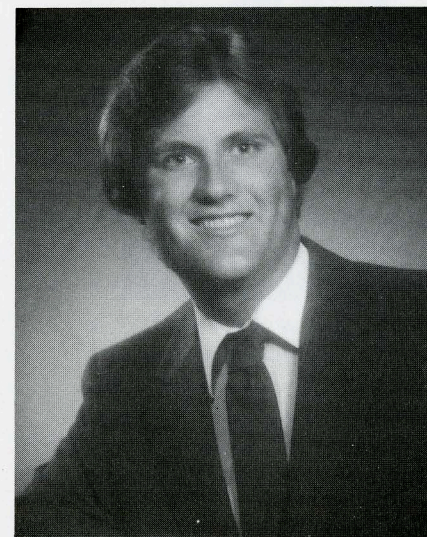
### THE ALTON B. ZERBY OUTSTANDING ELECTRICAL ENGINEERING STUDENT AWARD FINALISTS 1986

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Christopher Howard Jolly	North Carolina State U.
Angela Pajak	University of Dayton
Kathleen C. Uyehara	University of Hawaii at Manoa
Glenn Scott Weinreb	M.I.T.

# Student Award Winners

## THE ALTON B. ZERBY OUTSTANDING ELECTRICAL ENGINEERING STUDENT AWARD

Text by  
**Marcus Dodson**



**CHARLES ANTHONY BIER**  
**CO-WINNER**

CHARLES ANTHONY BIER graduated summa cum laude with a GPA of 4.2 (of 4.0), ranking second in a class of 100, was nominated by Theta Rho HKN Chapter at Rice University. He was honored with membership in Tau Beta Pi, Phi Beta Kappa, as well as Eta Kappa Nu. He also received degrees in mathematics.

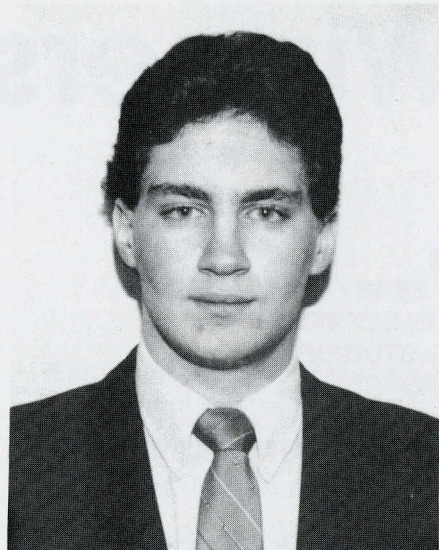
Mr. Bier designed microprocessor-based modules for product testing and production processes for electrical components for Allied Bendix Aerospace. Other employment includes writing software packages on a contract basis and tutoring in mathematics.

He did independent study in automatic control theory to prepare himself for a summer job assisting with a research project, and he participated in a sociology research project to study the influence of political action committees have on politics in specific areas. He was awarded the Marshall Scholarship for graduate study at Cambridge University and a National Science Fellowship.

He served his school and fellow students by being an active officer in HKN and IEEE, a member of the Rice Marching Owl Band, and several amateur jazz groups. Music consumes much of his time. He also leads the choir in his church.

For relaxation he enjoys jazz and church music as well as participating in physical sports, such as soccer, badminton, softball, and skiing, both snow and water. On the quieter side, he likes to fix electronic devices.

**Wins expense-paid trip to Marriott Lincolnshire Resort and an Award Dinner in his honor, from the Alton B. Zerby Perpetual Memorial Trust established by the Eta Kappa Nu Official Family, and a gift of \$1,000.00 from the Carl. T. Koerner Perpetual Memorial Trust established by Edith Ann Koerner.**



**DICK PHILIP WELCH**  
CO-WINNER

**THE  
ALTON B. ZERBY  
OUTSTANDING ELECTRICAL  
ENGINEERING STUDENT  
AWARD  
1986**

DICK PHILIP WELCH graduated summa cum laude with a GPA of 5.0, ranking first in his EE class of 591, was nominated by Alpha HKN Chapter at the University of Illinois-Urbana, completing the normal 4 year curriculum in three years. He was honored with membership in Tau Beta Pi, Golden Key and Eta Kappa Nu.

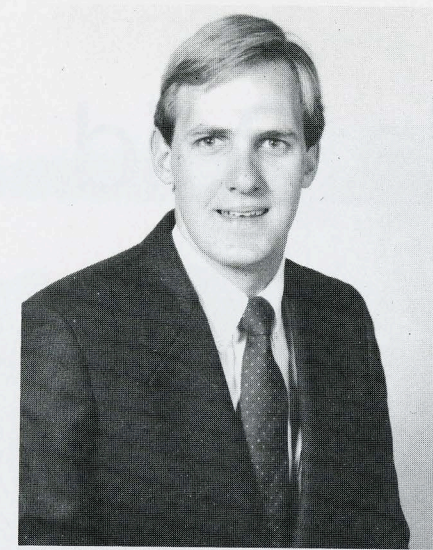
Mr. Welch revitalized a deteriorated 4-wheeled robot for his school's Advanced Digital Systems Laboratory, redesigning the electronic controls and repairing its mechanical operations. He gave it four direction "sight" via ultrasonic sensing with the associated software.

His summer intern employment included designing and testing printed circuits for IBM and research for Sandia National Laboratories for the Strategic Defense Initiative Program on image processing. He will pursue graduate studies at Stanford on a National Science Fellowship.

He served his school as VP of the Engineering Council, Program Chairman of the Engineer's Speakers Bureau and active in SITE (Student Introduction to Engineering), organizing on-campus seminars, etc. for promising High School students. He played a responsible roll in the operation of honor societies and organized social activities for his dorm. He was chosen for Knight of St. Pat, an on-campus honor group for the top 1% of the Engineering class involved in student activities.

For relaxation he enjoys collecting ceramic figurines as well as water sports, volleyball and backgammon.

**Wins expense-paid trip to Marriott Lincolnshire Resort and an Award Dinner in his honor, from the Alton B. Zerby Perpetual Memorial Trust established by the Eta Kappa Nu Official Family, and a gift of \$1,000.00 from the Carl. T. Koerner Perpetual Memorial Trust established by Edith Ann Koerner.**

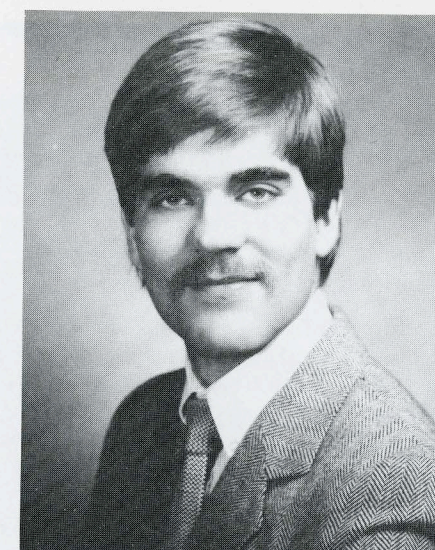


**JEFFREY WILLIAM PURNELL**  
HONORABLE MENTION

JEFFREY WILLIAM PURNELL graduated summa cum laude with a GPA of 3.97, ranking second in his class of 71, was nominated by Theta Omega HKN Chapter at the University of the Pacific. He was honored with membership in Mortar Board, Phi Kappa Phi, Tau Beta Pi, and Eta Kappa Nu.

Mr. Purnell was a laboratory teaching assistant and paper grader while on campus. In the Cooperative Education Program he designed circuits, hardware, and software for test instrument drives for a computer controlled test station for IBM. For Mobil Oil he assisted in the development of microcomputer based data acquisition systems.

He served as an officer in his social fraternity, IEEE, and organized a chapter of Tau Beta Pi for chartering. He organized and participated in the tutoring of students in EE laboratory in software problems and terminal operation. He accompanied and assisted the Dean on speaking engagements as well as speaking to High School students on his own. He was a "big brother" to a sorority. He was active in peer-to-peer counseling for curriculum and career guidance.



**DAVID ALFRED WILLMING**  
HONORABLE MENTION

DAVID ALFRED WILLMING graduated summa cum laude with a GPA of 3.98, ranking in the upper 1% of his class of 371, was nominated by the Gamma Theta HKN Chapter at the University of Missouri-Rolla. He was honored with membership in Tau Beta Pi, Phi Eta Sigma, Phi Kappa Phi, and Eta Kappa Nu.

Mr. Willming presented his paper, "Dielectric Breakdown in Thin Capacitors", to the St. Louis Section, IEEE, winning second place in the student paper competition. Through the Cooperative Work Program, at McDonald Douglas he designed digital and analog circuitry and software, fabrication and testing. He was awarded a National Science Fellowship for the 1986-87 academic year and was a finalist for the HKN Outstanding Junior EE Student Award.

He was Chairman of the student IEEE branch and president/station manager of the UMR Amateur Radio Club. He participated in many extra-curricular activities, such as taking part in the selection process for the new department chairman, helping build an HKN statue for display, as well as being active in his church.

# The Doolittle Raid

**O**n a quiet, sunny Sunday afternoon in Norfolk, Virginia, I answered my apartment telephone. The quivering voice of a young ensign stammered, "Sir, will you come to the ship right away!"

My first thought—one of my radiomen may have been electrocuted while working on the ship's powerful new radio transmitters.

In the Norfolk Naval Base at the gangway of the *USS Hornet* I noted a strange assembly. On the ship's quarterdeck were armed Marines. Sabotage—I wondered?

On board, the ship's secretary, Fred Holmshaw, tried to smile as he handed to me two plain language priority radio messages.



**OSCAR H. DODSON**  
Rear Admiral, U.S. Navy (Ret.)  
Assistant Editor—BRIDGE

The first dispatch, addressed to the U.S. Navy world-wide, read: EXECUTE WPL 46 AGAINST JAPAN. The second message was read in disbelief: AIR RAID ON PEARL HARBOR. THIS IS NOT A DRILL.

This was incredible.

Following the surprise attack on Pearl Harbor on December 7, 1941, the military forces of the United States, and our Allies, experienced a bitter series of unparalleled defeats.

The Pearl Harbor attack sank or seriously damaged five battleships and three cruisers. Three additional battleships received heavy damage, and many smaller vessels were sunk or seriously damaged.

A total of 177 American aircraft were destroyed.

In this attack 2403 Americans lost their lives, including 68 civilians. An additional total of 876 were missing and 1272 were wounded.

On December 10th the British battleship *Prince of Wales* and the battle cruiser *Repulse*, enroute to Singapore, were sunk by Japanese aircraft off the Malay coast.

On December 13 Guam was captured, and on December 20 Wake Island fell. On Christmas Day British Forces at Hong Kong surrendered to the Japanese. On January 2, 1942, Manila and Cavite were captured by the Japanese. On February 15 Japanese forces captured Singapore from the British, taking 60,000 prisoners.

From February 27 to March 1, in the battle of the Java Sea, the Naval units of the Allied powers, fighting against overwhelming odds, were largely destroyed. A few units escaped to Australia.

On April 9 the U.S. Army suffered its worst military defeat in the loss of the Bataan Peninsula. The island fortress of Corregidor, at the entrance to Manila Bay, did not fall until April 9.

Although unaware, through censorship, of the full extent of losses in personnel, ships, and planes, Americans were stunned by the huge bleak newspaper headlines.

It was imperative that a thrust be attempted against the mainland of Japan but how to reach that well-defended nation with our dangerously inferior forces?

Any offensive action against Japan by United States forces would give Americans a new vitality, a re-birth of hope, and of confidence in ultimate victory.

American war planners from President Roosevelt down were determined to destroy the growing concept that the Japanese military were invincible.



With army pilots assembled, Captain Mitscher (right) and Colonel Doolittle confer on the Hornet flight deck.

Admiral Ernest J. King, Chief of Naval Operations, as a top priority was reviewing with his staff the possibility of a direct attack on the mainland of Japan.

The Japanese government had assured their people that the sacred soil of Japan was safe from attack or invasion. Radio listeners were reminded that enemy forces had not touched Japanese soil since the year 1281, when a massive invading fleet of Mongols had been defeated, with the help of a violent storm. The Japanese had called this storm, which sank many Mongol vessels, a Kamikaze, or divine wind.

In January 1942 an American Naval captain was observing Army bombers make simulated attacks on a Naval air strip which was painted with the outline of an aircraft carrier flight deck. Captain (later Rear Admiral) Francis S. Low, war plans officer on the staff of Admiral King, wondered if Army bombers could fly off the deck of an aircraft carrier to bomb Tokyo.

This thought was discussed with Captain (later Admiral) Donald B. Duncan, Admiral King's Operations Officer, who quickly commenced a serious study of this possibility. Of the available

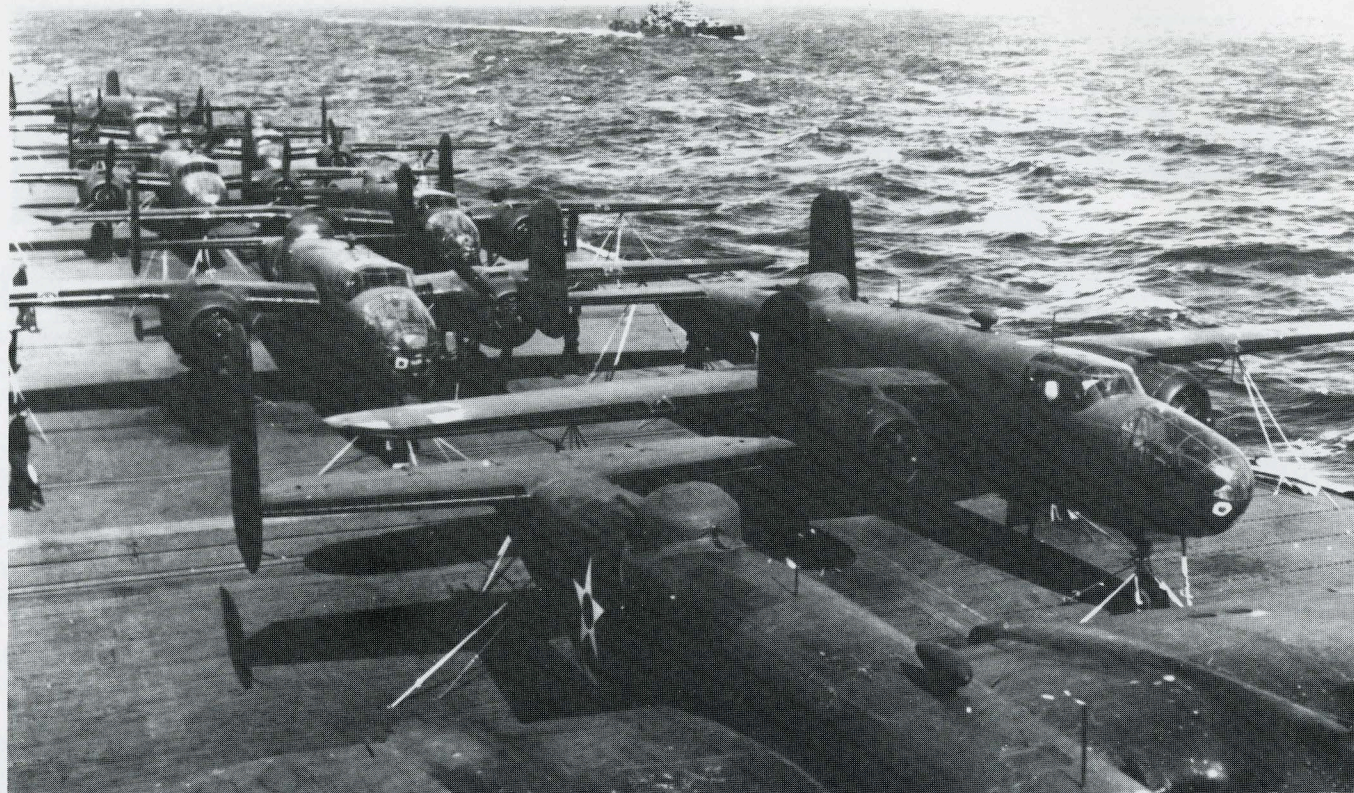
Army bombers, three were quickly rejected. The B-18 could not carry the equipment for the required distance, the B-23's wide wingspan would not permit a carrier takeoff, and, for the B-26 the carrier flight deck was too short. Captain Duncan believed that the plan was feasible if the B-25 was used.

When the proposal was presented to General Henry H. Arnold, Chief of the Army Air Forces, he quickly and enthusiastically accepted the plan.

General Arnold swiftly moved to implement this exciting and top secret project. The Army had an ideal leader for this dangerous offensive undertaking in Lieutenant Colonel James H. "Jimmy" Doolittle, who had recently been recalled to active duty.

Doolittle, a 1917 graduate of the University of California, and a Director for Shell Oil Company, had first achieved world-wide fame as the pilot of an airplane which won the Schneider Trophy at Baltimore in 1925. In 1940 he was back in active service.

Under General Arnold, the Army began to organize and equip the necessary units. The 17th Bombardment Group, USAAF, was selected to supply the planes and crews. Under Colonel Doolittle



Army B-25 bombers lashed to the flight deck of the Hornet

the Army units were assembled and commenced their training at Eglin Field, Florida. Lieutenant Henry F. Miller, USN, was assigned to train the pilots in short-takeoff procedure.

The newly-commissioned aircraft carrier *Hornet*, on shake-down cruise in the Caribbean, was selected to launch the B-25's.

Early in February 1942 the *Hornet*, having completed her shake-down cruise, arrived at Norfolk with officers and crew ready for shore leave. But liberty call was not sounded.

To the bewilderment of all hands, large dock cranes hoisted to the ship's flight deck two Army B-25 planes. Then the *Hornet* cleared the dock and headed for Chesapeake Bay.

In *A Ship to Remember*, Alexander R. Griffin described the reaction in *Hornet* to their strange visitors.

"The crew, shoes newly blacked and blues freshly brushed, looked blankly for a moment and then went back to quarters in a flood of 'scuttlebutt'—the wild and swift-spreading rumor of the Navy, which centered now on conjecturing why Army planes should squat, like awkward land birds, on the flight deck of a Navy ship.

"There were a dozen obvious reasons why the idea was preposterous. The B-25's had a wing spread far wider than that of the carrier's own planes. There

was barely room for them in the take-off alley. And though the 809-foot runway might barely accommodate their take-off, once away, by the grace of God and superfine pilots, how were they to land again?

"When Navy planes land on a carrier they are stopped short by a hook, lest they over-run the flight deck and plunge into the sea. In consequence, they are built with an unusually heavy understructure to bear the shock. But Army planes are meant to roll for long distances along the ground when they land. Their undergear is so delicate that the checking grapple might tear it to bits."

At sea the *Hornet's* escorting destroyers surprisingly reported sighting a periscope. The *Hornet* went to General Quarters, guns opened up and escorting destroyers depth charged the target, which was soon identified as the top mast of a sunken ship.

When secure from General Quarters was sounded, the Army pilots manned their planes. As I wished one pilot good luck, he said, "If we go into the water, don't run over us."

The two planes roared down the cleared flight deck and were easily airborne.

When this test launching was completed not even the ships commanding officer, Captain Mitscher, (later Admiral) was aware of the top secret plan to attack Tokyo.

In *Thirty Seconds Over Tokyo* Captain Ted Lawson, one of the B-25 pilots among those assembled at Eglin Field, describes the group's first meeting with Colonel Doolittle.

"We met Doolittle the next day, March 1st. I had heard and read a lot about him, of course, and had seen his picture a number of times. But it was quite a shock to see how young-looking his face was after those years of stunting, barnstorming and racing.

"About 140 of us crowded into Eglin's Operations Office. We sat on benches and window sills and, when we were more or less quiet, Doolittle began to talk.

"The first thing he said was, 'If you men have any idea that this isn't the most dangerous thing you've ever been on, don't even start this training period. You can drop out now. There isn't much sense wasting time and money training men who aren't going through with this thing. It's perfectly all right for any of you to drop out.'

"A couple of the boys spoke up together and asked Doolittle if he could give them any information about the mission. You could hear a pin drop.

"No, I can't—just now," Doolittle said. 'But you'll begin to get an idea of what it's all about the longer we're down here training for it. Now, there's one important thing I want to stress. This whole thing must be kept secret. I don't even want you to tell your wives, no matter what you see, or are asked to do, down here. If you've guessed where we're going, don't even talk about your guess. That means every one of you. Don't even talk among yourselves about this thing. Now, does anybody want to drop out?'

"Nobody dropped out. Doolittle talked about ten more minutes without telling us anything more. It wasn't a pep talk, exactly, but when he finished I felt very impressed. We walked out quietly, not saying much."

After three weeks in Norfolk, the *Hornet*, attired in a new war camouflage, joined a convoy of troop ships destined for Australia. After passage through the Panama Canal, the carrier, with escorting destroyers, headed for San Diego. For three weeks *Hornet* operated out of this port, training air crews for other carriers.

The ship then sailed northward and tied up at a dock at Naval Air Station Alameda on San Francisco Bay. On the nearby air strips were a large number of parked Army B-25's.

Doolittle assembled the Army pilots and crews. Again Ted Lawson quotes his sharp remarks: "I don't want any of you to raise hell tonight. Stick close to the field. I want every first pilot to make absolutely certain that his plane is in perfect shape and that his crew also is." Doolittle also informed his pilots, "Your radio equipment will be taken out of your planes. You will not need it where you are going."

The next morning the Army planes taxied to the *Hornet's* dock. One by one giant cranes lifted the B-25's, as if they were bicycles, and deposited sixteen on the *Hornet's* flight deck. All *Hornet* aircraft, dive bombers, torpedo planes and fighters, with wings folded, had been crowded into the hangar deck, just below the flight deck.

As the Army pilots and crew embarked, they proudly showed their bombers to the ship's personnel, who returned the compliment with a tour of the ship and an inspection of the *Hornet* planes in the hangar deck.

Questions to the Army personnel—why are you here, where are we going, who will protect the vulnerable *Hornet*—received only vague answers. Navy personnel admitted they could only guess their destination.

The next morning the *Hornet* cast off from the Alameda dock and headed out to sea. When the carrier was well clear of the harbor a surprising protecting force of cruisers and destroyers surrounded the carrier.

One of my responsibilities as ship's Communication Officer was to screen Naval and Allied radio traffic, including decoded Secret and Confidential messages, and daily show the most important traffic to the Captain.

Captain Mitscher was seated at his cabin desk, holding a document and smiling. Without a word he passed the papers to me. I read the Chief of Naval Operation's orders for the *Hornet* to launch the B-25's for an attack on Tokyo and nearby cities. In joyous surprise I wanted to scream, but had to control my emotions in the presence of the captain. He said quietly, "As soon as we are well clear of the shore line, I will announce our mission to the ship."

On the bull horn, the ship's company heard the voice of the Executive Officer, Commander (later Rear Admiral) George Henderson, who spoke just three words: "Now hear this." Then came the Captain's voice, calm and distinct: "The *Hornet* will take the Army bombers to a launching position near Japan. The B-25's will then take off to bomb Tokyo." In the ship there was a moment of stunned silence. Then wild shouts rang throughout the *Hornet*.

The Captain had reminded all hands that the mission was secret and would remain secret after the Army planes were launched. He also cautioned against throwing overboard any identifying papers—letters, magazines, the ship's daily schedule, and the ship's newspaper.

At the next meeting of the Army group, Doolittle again gave each pilot an opportunity to withdraw from the mission. None did.

"It is going to be a tight squeeze," Doolittle told them, "but we will make it. The targets are Tokyo, Yokohama, Osaka, Kobe and Nagoya.

"After bombing we will head for China, land for refueling at carefully selected Chinese airports, then fly to Chungking. The Chinese Government is giving us every possible cooperation."

The *Hornet* officers briefed the Army pilots daily on anticipated weather, the history of Japan and China, current political organization, the culture of both nations, and civilian and military dress. Lieutenant Steve Jurika, a Japanese language student, was helpful in describing landmarks which would guide pilots to their targets. The pilots memorized aerial photographs and maps of the areas over which they would fly.

Doolittle selected Tokyo as his target and gave the other pilots a choice of cities they would prefer to bomb. He warned that no bombs were to be dropped on the Emperor's Palace. Pilots were also warned not to carry any paper which might identify *Hornet* as the launch carrier.

Each Army plane would be loaded with three 500-pound explosive bombs and one 500-pound incendiary. Specific targets selected included armament plants, Naval dock yards, railroad yards, oil refineries, and steel plants.

After a few days at sea the *Hornet* cheerfully greeted the appearance of the carrier *Enterprise* with her powerful support force of cruisers and destroyers. The *Enterprise* immediately launched a Combat Air Patrol to protect the *Hornet*, and daily air searches ahead of the task force.

Embarked in *Enterprise* was Rear Admiral Halsey, who assumed command of the unified task force.

The Army pilots had been warned that they would quickly fly their planes off the flight deck in case *Hornet* were attacked by Japanese aircraft. With this possibility in mind, *Hornet* officers kept the Army personnel informed daily of the *Hornet's* location at sea, and the course and distance to the nearest land.

Each day my duties included showing Colonel Doolittle copies of all war radio traffic.

The *Hornet* radio room was also monitoring the commercial broadcast programs of JOAK Tokyo and several other Japanese broadcast stations. It was believed that these stations would quickly cease their broadcast if the Japanese military received any warning of the approach of the *Hornet* task force.

Colonel Doolittle was amused by the Japanese propaganda programs, broadcast in English, and was pleased to hear daily that the Japanese broadcasts gave no indication that they were aware of the *Hornet's* approach.

On Friday, April 17, the bombs were loaded in the Army planes, and final checks by both Army and Navy personnel were made on bomb release equipment, batteries and gasoline supply.

Plans called for launching the B-25's at sunset on Sunday, April 19, with the planes arriving over Tokyo at dawn, and reaching the Chinese coast in the afternoon.

Friday night the *Hornet* had encountered heavy seas and high winds. At dawn the rain had ceased, but strong winds continued.

The Saturday dawn air patrol sighted a small Japanese vessel, a former fisherman, but now, as we later learned, one of many patrol vessels operating under the Japanese Fifth Fleet. Cruisers and destroyers speeded up and opened fire. The fishing vessel was so small it was difficult to hit, but was finally sent to the bottom.

A plain language Japanese radio message had been heard: "Strange planes in the air."

Another dispatch, apparently not intercepted by U.S. Naval radio receivers, but received by Combined Japanese Fleet Headquarters, reported a formation of ships, including three carriers, on westerly course.

The task force had made a radical turn to avoid the patrol vessel but quickly sighted a second small craft, and an *Enterprise* plane reported a third patrol vessel about thirty miles ahead of the carriers.

Doolittle raced to the bridge to confer with Captain Mitscher. By blinker, messages were exchanged with Admiral Halsey.

The patrol vessels had been sighted about 800 miles from the Japanese coast. *Hornet* had intended to steam another 400 miles before launching the B-25's.

Since the task force had been sighted, the element of surprise had vanished. On every American mind was the question, "Where are the nearest Japanese carriers and battleships?"

The decision was made to launch the bombers. The *Hornet* bull horn broadcast "Army pilots man your planes."

Admiral Halsey flashed a message to Doolittle and his pilots: "Good luck and God bless you."

Navy airdales ran to the bombers for a final check of equipment. Officers who had briefed the Army pilots raced from plane to plane shouting, "Good hunting, God protect you." Additional tins of aviation fuel, medical supplies and whiskey were quickly distributed to each plane. The *Hornet*, with full speed plus, was headed into the wind. The carrier was pitching.

Doolittle, with the shortest runway, half the distance of the flight deck, warmed up his engines. When at full throttle, the *Hornet* signal launcher closely checked the ship's pitch. With the flag signal to launch, chocks were pulled from the wheels. Doolittle's plane speeded toward the bow.

Flight deck personnel quickly dropped prone on the deck to permit the wings of the plane to pass over them. The upward surge of *Hornet's* bow lifted the plane into the air. Doolittle was on his way to Tokyo.

In the island structure and on the flight deck, cheers were heard above the roar of the bomber engines.

Within an hour after the command to man planes, the remaining fifteen planes were launched and headed for Japan.

The *Hornet* brought her fighters to the flight deck. The Task Force retired at high speed.

As the ships headed east, two additional Japanese picket boats were sighted and sunk.

About four hours after the launch, about 2 p.m. in Tokyo, the female announcer on radio station JOAK screamed "Enemy planes are bombing Tokyo." In the background the wail of air-raid sirens was heard before radio JOAK went off the air.

The bombing attacks were successful. The Army planes encountered extremely light air and anti-aircraft opposition. All planes dropped their bombs on targets and headed for the China coast.

Due to the unexpected early launch, ten hours ahead of the original schedule, the planes arrived over China in heavy squalls, rain and darkness. One plane landed in Soviet territory. The others made forced or crash landings in China or in waters off the China coast. Some crews bailed out.

Chinese villagers and fishermen came to the aid of injured pilots and crewmen, hid them from nearby

units of the Japanese army, and passed them by night from village to village until they reached hospitals in the safety of Chinese-controlled territory, then on to airfields where rescue planes could fly them to Chungking.

A War Department report released April 20, 1943, listed what happened to those who participated in the raid. Five were interned in the Soviet Union; two were missing in action; five who landed in Japanese-occupied territory in China were prisoners of war; three missing were presumed to be prisoners of war; one was killed when his plane crashed; and seventy-four safely reached Chungking.

It was learned later that the Japanese had executed three of the Army prisoners and had "systematically slaughtered all Chinese" who had helped the American flyers after they crashed.

With the end of World War Two the War Department report of 1943 was modified by more accurate information. Four American airmen were killed in the crash landings in China. The execution of three of the flyers after a show trial in Tokyo was confirmed.

In the months immediately following the an-

nouncement of the Tokyo raid, Americans were jubilant, reading with pride every detail of the bombing news releases.

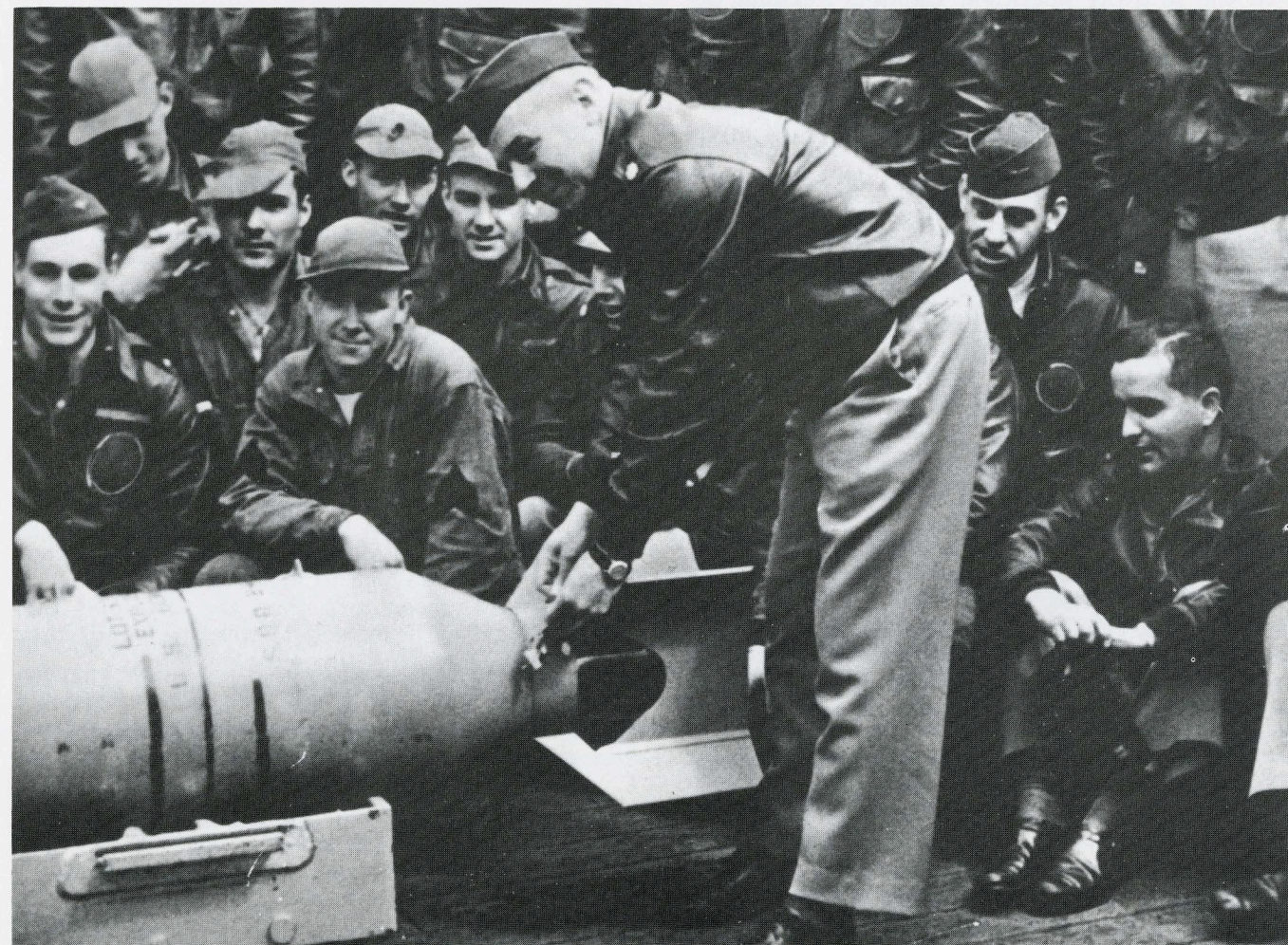
However, some American military leaders questioned the wisdom and military value of the raid. Sending two of four available American carriers deep into Japanese waters was considered an extremely risky move. The bomb load was not sufficient to cause serious damage.

But long after the end of World War Two, the Doolittle raid has been credited with a strange series of Japanese military and Naval decisions which would doom that nation to defeat.

In *Midway, the Battle that Doomed Japan*, published in the English language in 1955, Mitsuo Fuchida, Captain, Imperial Japanese Navy, who led the air attack on Pearl Harbor, writes:

"The greatest importance of the Doolittle raid lay in its immediate effect on the controversy still going on over the Combined Fleet plan for an assault on Midway. Although the Naval General Staff on 5 April had reluctantly agreed to the operation in principle, the time of execution and other vital points

Colonel Doolittle ties a medal he formerly received from the Japanese to a bomb that will be dropped on Tokyo



were still in dispute when Colonel Doolittle's raiders successfully unloaded their bombs on Tokyo and other Japanese cities.

"So far as Combined Fleet was concerned, the raid steeled its determination to press for early execution of the operation as originally proposed. The defeat of all his precautions against an enemy carrier-borne attack on the homeland cut Admiral Yamamoto's pride to the quick, and he resolved that it must not be allowed to happen again at any cost. There must be no delay, he decided, in taking the offensive to destroy the American carrier forces and to push the defensive patrol line eastward to Midway and the western Aleutians.

"Nor were the implications of the Tokyo bombing lost on the Naval General Staff. Even the most vociferous opponents of the Midway plan were now hard put to deny that the threat from the east, if not greater than the potential threat from Australia, was at least more pressing and immediate. Moreover, the failure to keep the capital itself safe from attack reflected as much on the Naval General Staff as on Combined Fleet. The result was that all remaining opposition to the early June Midway attack deadline and other moot points of the Combined Fleet proposal promptly vanished, and Fleet Headquarters was enabled to proceed with the elaboration of the final plan of operations."

In the Midway operation Captain Fuchida describes the speedy rearming of fighters in the Akagi after they had repelled the attack of American torpedo planes. The carrier was turning into the wind to launch when a lookout screamed "Hell-divers."

Fuchida describes the American dive bomber attack:

"The terrifying scream of the dive bombers reached me first, followed by the crashing explosion of a direct hit. There was a blinding flash and then a second explosion, much louder than the first. I was shaken by a weird blast of warm air. There was still another shock, but less severe, apparently a near-miss. Then followed a startling quiet as the barking of guns suddenly ceased. I got up and looked at the sky. The enemy planes were already gone from sight.

"The attackers had gotten in unimpeded because of our fighters, which had engaged the preceding wave of torpedo planes only a few moments earlier, had not yet had time to regain altitude. Consequently, it may be said that the American dive bombers' success was made possible by the earlier martyrdom of their torpedo planes. Also, our carriers had no time to evade because clouds hid the enemy's approach until he dove down to the attack. We had been caught flatfooted in the most vulnerable condition possible—decks loaded with planes armed and fueled for an attack.

"Looking about, I was horrified at the destruction that had been wrought in a matter of seconds. There was a huge hole in the flight deck just behind the amidship elevator. The elevator itself, twisted like molten glass, was drooping into the hangar. Deck plates reeled upward in grotesque configurations. Planes stood tail up, belching livid flame and jet-

black smoke. Reluctant tears streamed down my cheeks as I watched the fires spread, and I was terrified at the prospect of induced explosions which would surely doom the ship."

In similar attacks at Midway, American carrier planes destroyed four Japanese carriers, a disaster from which Fuchida writes that the Japanese Navy never recovered.

We may look back to the Doolittle raid as impelling the Japanese to attack Midway, where their defeat turned the tide toward ultimate American victory in the Pacific.

The Doolittle Raiders had their first reunion in December, 1945, at Miami, Florida, with about forty Raiders attending. In the Spring of 1986 the forty-six Raiders still living are again planning for their annual reunion.

After the raid on Japan, Doolittle was promoted to Brigadier General and awarded the Medal of Honor. He later commanded, with distinction, the Twelfth United States Air Force, the Northwest African Strategic Air Force, and in 1944, as a Lieutenant-General, the Eighth United States Air Force.

With Jo, his wife of sixty-three years, General Doolittle leads a tranquil life in Carmel, California.

Photographs courtesy of the  
United States Naval Institute

#### AS A MAN GROWS OLDER

He values the voice of experience more and the voice of prophecy less.

He finds more of life's wealth in the common pleasures—home, health, children.

He thinks more about worth of men and less about their wealth.

He begins to appreciate his own father a little more.

He boasts less and boosts more.

He hurries less, and usually makes more progress.

He esteems the friendship of God a little higher.

Roy L. Smith

For a whole year after her boyfriend had sailed away to Vietnam, Maureen had not heard a single word from him. Now, at last, the postman finally delivered the first letter from her love, written from "Somewhere in the South Pacific area."

Hastily, Maureen tore open the envelope, but inside, instead of the expected letter, she found a thin strip of paper bearing a brief message:

"Your boyfriend still loves you, but he talks too much."

(signed) J. L. Smith, Censor.

I've met a few people in my time who were enthusiastic about hard work. It was just my luck that all of them happened to be men I was working for at the time.

Bill Gold

# The First Time I Saw Paris

## part twelve

# Sinners In Paris

by PAUL K. HUDSON  
Editor — Bridge

Within this vale of toil and sin  
Your head grows bald but not your chin.

No one will question the truth of this old BurmaShave sign, or the fact that there are lots of kinds of toil and lots of kinds of sin. In Paris there is, I think, one kind of sin that is far greater than all others and it was my misfortune one afternoon to commit it. I do not think much fruit is grown in France and most of it is imported. It is very high quality and very expensive. There are small fruit markets all over town. In American super-markets the customers are permitted to pour over the fruit and select the particular items that are wanted. A lot of the fruit gets damaged but the markets are willing to stand that loss. Not so in Paris. The fruit is so expensive that the customer is not permitted to touch it at any time. You just point to what you want say how many you want. One afternoon in a market I was standing beside a box of peaches when a clerk came up and stood on the other side of me. Instead of getting out of the way so that he could pick up the two peaches that I wanted, I just reached over and picked them up and handed them to him.

Quickly I realized my blunder. The sun stood still and went into an eclipse, birds fell dead out of the sky, an evil wind came up and mothers grabbed their little children and hurried them into their homes. The clerk started shouting at me and shaking his fist—I was afraid he would have apoplexy. I presumed that he was swearing at me and so I listened for the only two French swear words that I know but he was going much too fast for me. When he ran out of breath I thought he was finished—but no. He then walked over to the center of the market, pointed his finger at a sign high up on the wall and started shouting again. I could not read the sign because it was in French but I am sure I know what it said: KEEP YOUR COTTON-PICKIN HANDS OFF THE FRUIT OR YOU WILL BE DISEMBOWELED AND THROWN INTO THE RIVER. Then he weighed the peaches, I paid him, and he started waiting on another customer just as though nothing had happened. I realized then that I had witnessed a finished theatrical production.

In fairness to the clerk, I think there may have been an emotional problem involved. I do not think the clerk considered himself to be a clerk but a *host* who served the public much as a *dinner host* serves his guests at the table. When I picked up the peaches I insulted him by taking all that away from him.

There are many fallacies concerning Paris and its people. I was always told that Paris drivers are a reckless lot, and at the Place de la Concorde you just fight for your life. I do not know how such a silly idea got started. It was written by someone who had never driven in New York City on a Saturday in the summertime. I rode through the Place de la Concorde several times and stood and watched the traffic there at several other times and I found it quite mild.

Paris people are supposed to be a bit rough on the tourists and especially the English-speaking ones. Maybe I was not there long enough to be a good judge of that, but, except for the time I broke the rule in the fruit market, no one was unkind to me in any way. As a matter of fact I found an English-speaking cab driver that was the most considerate and helpful driver that I have ever known anywhere. I was so deeply touched by his kindness that I took his picture in front of the Eiffel Tower and told him that I would put it in my Magazine. It was then his turn to be touched. (see photo) The young man's name is: Francois Collier, 59 Av. Afortville, 94600 Choisey le Roi, France.



**Our friendly and helpful Cab Driver Francois Collier.**

If any of my readers ever go to Paris you might want to write to him and make an appointment for him to show you the town. He took me all over town and stopped at various places and waited patiently while I took photos of various things. When we got to the Pere Lachaise cemetery he said, "I will drive you to the places you want to see or, if they will not let the cab in the cemetery, I will walk in with you to make sure you get to see what you want." We might say, "Well sure, but he was going to charge a big price for all that "waiting time." When we got back to the hotel he looked at the cab meter and said "sixty-four francs (eight dollars). I said, what about all that waiting time you had?" He replied, "Oh, I don't know, you can do whatever you want about that." I gave him a handful of money and he seemed to be pleased and appreciative.

At this point I have to be honest and say that I missed all the fun times in Paris traffic. One Saturday evening were were sipping hot chocolate at the Sidewalk Cafe of the Cafe de la Paix. It was about ten o'clock and the place was full, with every table taken. Then suddenly, in a matter of minutes, the place became empty except for us. After I considered the matter for a while I came to the conclusion that Paris theaters start very late on Saturday nights and that everyone had gone to an entertainment of one kind or another. The next day we were talking with some friends from New York who were staying at our hotel and they told us that they had gone to the show and that when they were trying to come back to the hotel at three o'clock in the morning the traffic was worse than Times Square on New Year's Eve. They said that buses were pushing taxi cabs in front of them to get them out of the way. Every cab driver in Paris was on

the streets. I think that would be most interesting and I would have enjoyed it, but I am not a night owl. Three o'clock in the morning is a little late for me. The account was easy to believe because at 10 o'clock Sunday morning I wanted to go someplace but could not find a cab. All the drivers were home asleep.

The last day we were in Paris, our train was to leave at eight in the morning. Thinking we might have a problem with taxi cabs, we chartered one and had it get us to the station at seven o'clock. It was the Gare du Nord Station and it must be one of the main ones for commuters. There were 23 tracks close together and no partition between them and the waiting room. Every fifteen minutes or so a commuter train would arrive on each track and dump hundreds of people out. The people would converge to one exit that went below to, I presume, the subway trains.

I would not be able to estimate how many thousands, or tens of thousands of people came through that station in a period of an hour.

There were waste-receptacles mounted at various places on walls, fences, etc. As I was standing there, a man who looked to be quite poor came up and rifled through the receptacle near me. Whatever he was looking for, he did not find it. But I watched him and saw that he went over the entire station looking in the various receptacles. I presumed that he was looking for scraps of food but it may be that he also was looking for bottles or other things he could sell. Anyway, I felt sorry for him. His pants looked like they would stand up without him in them. I went over to where he was and handed him a ten-franc coin. It would be a little over a dollar in American money. He did not thank me in any language, did not

smile at me or really take any interest in it other than to put it in his pocket. He just acted like people had been giving him money all morning and he was starting to get a little tired of it.

A little later a middle-aged woman come by and went through the waste receptacles just as the man had done. She was wearing very poor and unsuitable clothes and again I thought about giving a coin. But then I noticed that she looked fairly well fed, at least with starches, and so I did not do it. Now that it is too late, I wish I had.

On the train back to the Channel Coast I saw something that I had not seen in a great many years—A Train Butch. A Train Butch is a man who comes through the cars selling coffee, sandwiches, cookies, etc. Butch is short for Butcher and he is called a Butcher because his prices are higher than those in the cities, for the same items, and so people said that they were being *Butchered* by the prices. The Butches on American trains years ago were not offended by the name and if you wanted something from one you would call out, *Hey Butch*. I do not remember any polite little ladies saying, "Mister Butch, Sir, may I please have -----." Butches are no longer on American trains because they were replaced by snack shops in the lounge cars.

The Place du Tertre is a tourist *must* and so there is no one there except tourists, who look at each other (sometimes not bad, as above). In the evening



they will go to the Folies and other shows to see the French dancers who are mainly English, not because of greater talent but because of longer legs.



# A Modern Journey . . .

## In An Ancient Land

by Joan Spink

As the wheels touches down on the runway at Cairo Airport, I thought "I can't believe it, Egypt at last." I was just a kid in school when I discovered ancient Egypt and I can still remember the awe that I felt. It was the beginning of a lifelong dream and love affair with the land of the Pharaohs. Forty years is a long dream, could the reality be as exciting as the dream?

Once clear of the airport my husband and I were greeted by our tour guide—a wonderfully knowledgeable woman who was to be our friend as well as our guide for the next two weeks. The first thing that our "Hadja" did was to check us into our hotel. I will have to say that hotel accommodations in Egypt are excellent. They are clean, comfortable and attractive. I cannot say the same for the food—but that's another

**Pyramid of Cheops and Chephren—Largest & Second largest**



story, one I will try to tell you about later. It was at the hotel that evening that I had my first glimpse of the pyramids. It was dark by this time and so I saw them standing out of the darkness of the plateau—lit from below by electric lights and from above by moonlight. They appeared to just float in the air. That was a sight that I will never forget.

The next morning and every morning thereafter, promptly at 6 AM our tour began. Let me rephrase that. Every morning at 6 AM, except for those mornings when Hadja coaxed us up at 3 AM because we had "something special" to do. I really would not recommend this type of tour for the elderly, or, for anyone who resents looking and feeling that way for several weeks. This first day I call our Pyramid Day. We visited both the worlds oldest, the Step Pyramid at Sakkara, and the worlds largest and grandest, the Pyramid of Cheops at Giza. Here on the plateau of Giza we were able to make the journey back 4500 years and follow those now silent footsteps deep into the heart of the pyramid to the burial chamber of Cheops himself. This had to be the greatest thrill I would experience, or so I thought then. I was to feel this same sort of thrill almost every day for the entire trip until I was almost past being able to "feel".

The highlight of the following day had to be the Egyptian Museum and the Tutankhamen exhibit. If you saw the "King Tut" exhibit when it toured the United States you saw only the tip of the iceberg. I won't even try to describe it all for you. How does one tell about a solid piece of gold weighing approximately 300 pounds that is so beautifully wrought that it takes your breath away? Or find the words to let you "see" the 4 rooms made to nest within each other, the largest of which measures 17 feet by 11 feet by 9 feet high? All of these rooms were built of the finest wood and then overlaid with the most exquisitely worked gold. Description really is impossible.

Our last day in Cairo was spent "at leisure". Nothing could be further from the truth, at least for my husband and me. We opted to revisit the great pyramid plateau and were so glad we did as that is where we



**Yours truly on camel and infamous camel driver**

met "Sam". Sam claimed that he was a government tour guide and had been one for 52 years. Perhaps he was, but he was also the most engaging scoundrel ever to take a couple of tourists for the proverbial "ride". Along the way, though, Sam introduced us to a lot of fascinating people—the first being a camel driver. Now what self-respecting tourist could leave Egypt without taking a camel ride? Surely not yours truly. So we dutifully paid the driver a sum of money to allow me to climb on board the most ungainly, loudest and smelliest beast that I have ever met. After risking my life for several minutes, all the while proclaiming so to the world (much to my husband's amusement) the driver finally "downed" the camel and proceeded to help me off. All I can say here to ladies is never, but never, allow a camel driver to help you. I am certain that that man had more hands than his camel had feet!!

Sam then proceeded to allow us to "tip" several other furtive looking people who followed us about unlocking gates and letting us go into many underground tombs that are not on the usual tourist route. Most people do not realize that the pyramid plateau is so much more than the 3 large pyramids that you see in travel ads. In addition the plateau has, of course, the Sphinx, many small pyramids and other burial chambers as well as the huge barge of Cheops. All of

these wonders Sam and his friends "allowed" us to see.

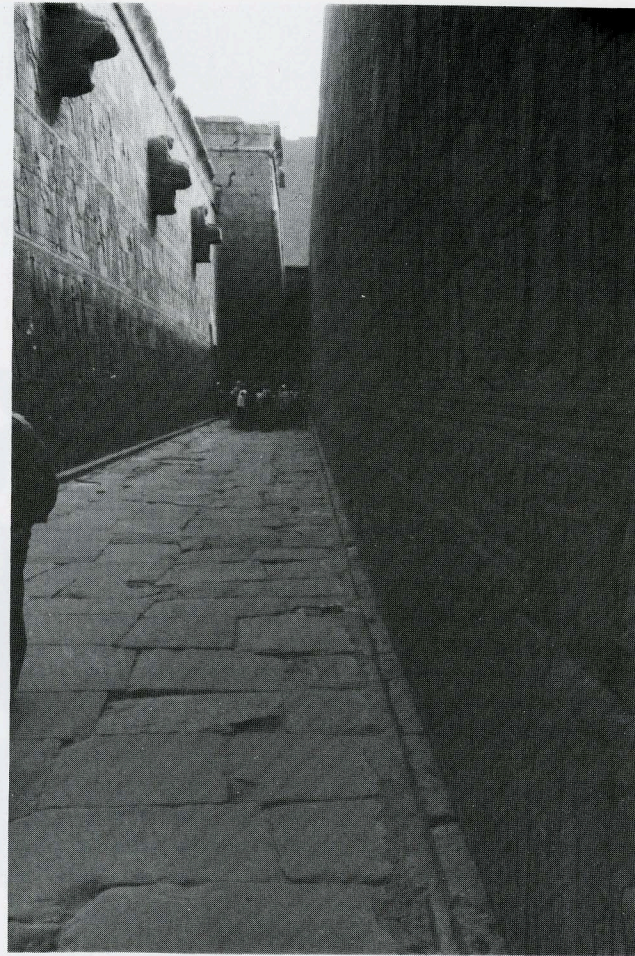
As the day wore on we noticed that Sam was leading us down off the plateau and into a little village nearby. By this time we were both very tired and very hot and as we were to soon learn, Sam intended to remedy both these problems. He now took us to meet his last, and best friend, Abdul. Several steps down an alley, a tap on a certain door and we were admitted to "paradise with a price". As we stepped through the door and our eyes became adjusted to the darkness I began to think that a mistake had been made here! Now mind you, I have never been inside a brothel but in my mind's eye, this surely looked like it should be one. The floors were thickly carpeted, as were the walls, the lights were very low, it was cool, and the most delicious fragrance was in the air. From out of nowhere our host appeared—bowed to Sam then led us into a lovely room where he seated us upon plush velvet cushions. A snap of his fingers brought us a tall cool drink. About this time my husband and I exchanged glances—it was now sheep-shearing time and we were about to be "fleeced". For the next hour or so we talked, laughed and had several more drinks. In short we just relaxed and had a good time. Sam then reappeared and we left there, a hundred dollars poorer but with three large bottles of Abdul the perfume-maker's finest fragrances!!!

The next day found us, after our 4 AM flight, comfortably settled aboard our Nile cruise ship. Since Egypt is the Nile what better way to see both than from the deck of a luxury floating hotel? We boarded our ship at Luxor and sailed downriver, or North. Since the Nile flows in the opposite direction than most great rivers we were always confused as to which way we were going. Add to this the "Port and Starboard" business and you have a ship full of really mixed up people—Anyway, while cruising downriver we stopped to visit Dendera, the temple with the most elaborate wall decorations of almost any monument in Egypt. Here also we were able to climb to the roof where we were "surrounded" by the bleak Egyptian desert. From Dendera we sailed on to one of the oldest temple sites, Abydos. This temple is noted for its complete hypostyle halls, meaning that all three—the great hall, the inner hall, and the "Holy of Holies"—was virtually intact. After Abydos the ship turned around and headed back to Luxor where we would spend two days in and around the temples of Karnak.

What can I say about these magic names—unbelievable—indescribable—all this and more. When you walk among the pillars of Karnak it is as if you are in a forest, a petrified forest. The 80 foot high columns actually block out the sun. Everything here is massive. The 260 columns are 12 feet in diameter, the pylons reach toward the sky and the statues and obelisks are not to be believed. Consider only the obelisk of Queen Hatshepsut. It is 105 feet tall, weighs 350 tons and was quarried over a hundred miles from here. All this was accomplished with only wooden wedges to quarry the granite and manpower to haul and erect it? Impossible—yet, there it has stood for 3500 years!

Again I thought nothing could top this, until we crossed the Nile to visit the mortuary temple of Hatshepsut and the Valley of the Kings! Probably my only regret on the whole trip was not having more time here on the West bank of the Nile. The tombs that are in this valley are hewn out of the solid rock of the mountain, many of them being several hundred feet in length. This great labor is all but forgotten though as you stand surrounded by the art of the tombs. Every square inch of wall space is carved and painted—and the colors, even after all these centuries the colors overwhelm you. The Great Masters of the Renaissance would stand in awe!

I promised at the beginning of this article that I would mention the food we had in Egypt. On the ship all the members of our tour ate together and it became quite a game guessing what our entree was each night. The guesses would always range from fish right though fowl, and all for the same piece of meat! Of course this was a great source of amusement for all of us since we just never could decide what we were eating. That is, until one afternoon when we were docked to take on provision. My husband and I were up on deck and he happened to step over to watch the loading. After a few minutes he called quietly to me, "Come on over and see this—have you ever seen a hindquarter of *anything* that is 8 feet long?" Since I am a farmer's daughter I can tell you



Long carved walls at Edfu

with certainty that the meat that I saw that day was definitely not beef! After that our little guessing game was ruined, at least for us. We decided to be good samaritans though and not tell our fellow travelers that our mysterious entree was "camel"—why spoil the fun for them?

After our too short stay in Luxor we began cruising South. Our first port of call in the South was the town and temple of Esna. Here the temple is about 45 feet below the present level of the town. This does not mean that it was dug out, rather, that it was covered over through the centuries by the silt of the river and sand of the desert. By and large this happened to all of the temples and is one very good reason that they are so well preserved today. After Esna we docked at Edfu. Here I had my husband take dozens of pictures of the long carved walls since I knew that even I would not believe what I had seen unless there was some proof!

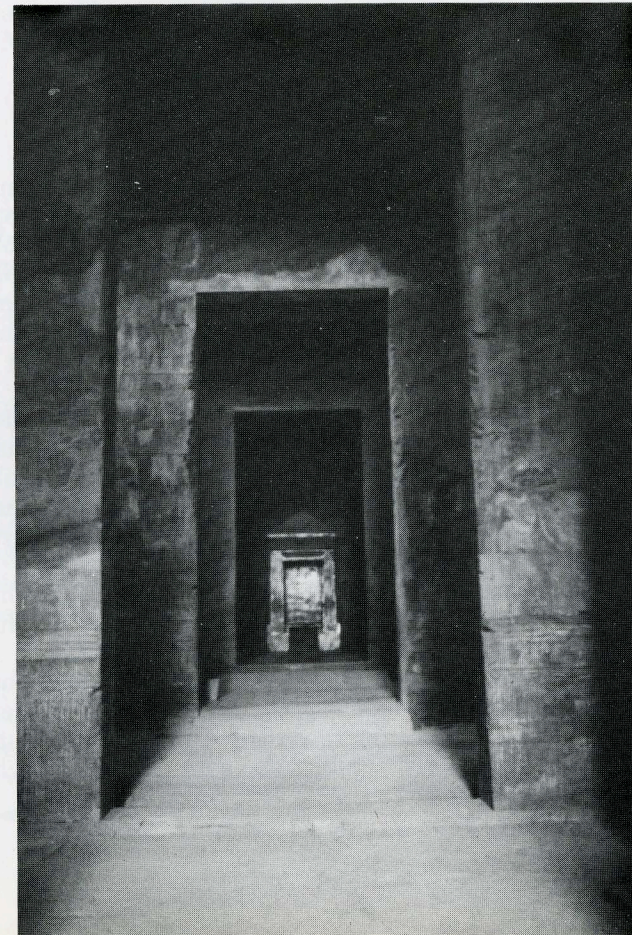
Almost directly across the Nile from Edfu you will find Kom Ombo. This unusual site was dedicated to a crocodile-headed God and the reliefs here are the best and the clearest of any that we saw above the ground. Of course they should be since they were so recently carved. The temple of Kom Ombo is only about 2300 years old, you see.

We now pulled into our final dock at the city of Aswan, which is in ancient Nubia. From here we would visit our last two temples and have some time to visit the city and her people. I think this would be a good place to "lay to rest" all the rumors that you hear about the Egyptian people not liking Americans. All of us on the tour found the people, wherever we encountered them, to be most friendly and helpful. We were never once mistreated and always, but always, felt safe and welcome. Another rumor is that you will be constantly pursued by beggars. The only "beggars" that we were approached by were school children trying to practice their English and occasionally asking you for a pen to write with. The genuine warmth of all the people we met and did business with certainly added to the pleasure of our visit.

By the time you get to Aswan you are conscious of a change in the temperature. It is hotter. One of my husbands favorite stories is that the natives here in Aswan will roast their peanuts by burying them in the sand for a few hours. Of course this is only in the Summer when the temperature reaches, and stays, at 140 degrees—in the shade! Thus touring Egypt in the Summer months would not be recommended, even by me.

A cruise ship can go no farther than Aswan because the High Dam blocks all river traffic from here on. Actually from here on to the border of Egypt there is no longer a river, only Lake Nasser. So it was here on

Holy of Holies—at Philae



and in the lake that we found our final temples. Philae is built on an island, now in the lake but originally of course in the river itself. For centuries this temple complex was destroyed yearly by the flooding of the Nile, and rebuilt again after the water had subsided. Now, our tour guide had been trying for almost two weeks to convince us that the Egyptian people had not been slaves who were forced to labor on the many temples and tombs. It was here at Philae that I finally came to believe it. Would a people who were enslaved return year after year for centuries to rebuild a temple in this unmercifully hot, out-of-the-way place? Rather does it sound as if the people returned willingly, out of reverence for their gods? Much like, I think, those people who labored so long and hard to build the medieval cathedrals of Christianity or the great Mosques of Islam, truly a labor of love.

Our final, and by far our hardest tour of all, was the journey to Abu Simbel. I'm sure that almost everyone is familiar with the U. N. effort to save this monument from flooding when the high dam was built. We were now to see what all the "fuss" was about! It takes quite an effort to get to Abu Simbel. You have a 45 minute flight over the lake, after which you board a bus for a short trip through the desert to the new, raised site, of the Temple of Ramses II. When you finally come face to face with the colossal statues of Ramses you do know without a doubt that it was all worth it. Here at this remote site, 700 miles up the Nile, a man dared to come, to leave his mark for all mankind to wonder at. Here also, other men came—engineers, archeologists, laborers—to save this great legacy of the past, to save it for us!

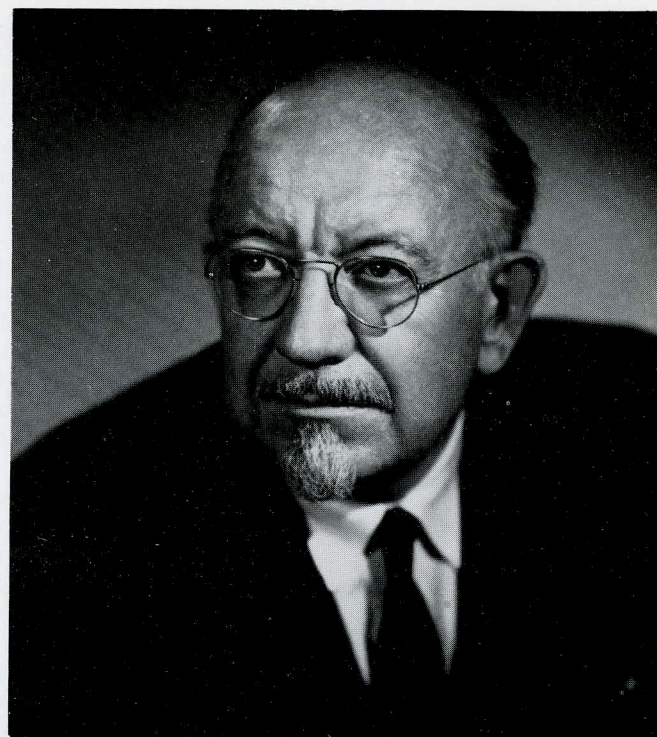
That same evening found our tour boarding a sleeper train for the overnight trip back to Cairo and the end of our journey. It had been a very long day. We had been awakened at 3 AM, taken 5 buses, 2 planes, 2 small boats, packed our bags and said "goodby" to our cruise ship, and transferred to the train—and all this before 5 o'clock in the afternoon. Were we able to sleep that night? Indeed we were, and on this last night in Egypt we were able to relax and dream a bit too. We were able to relive all the unexpected pleasures our two weeks had provided. Like walking on the Avenue of Sphinxes, that two mile long ceremonial road between the temples of Karnak and Luxor. Or standing on the spot where the holy family lived after fleeing Herod. This was certainly a "religious" experience for a Christian—one we *all* felt very very deeply. Then there were the fun things—dressing up, outrageously, for the masquerade party on our ship. Being entertained by the Nubian dancers and even dancing along with them—and yes, that age old Egyptian entertainment, belly dancing—Dreams all, but now for us a reality as well.

Since I've been home I have been asked many times about returning to Egypt. Heaven only knows it is a very long trip, you never get your proper rest, the food is awful, it is hot and dusty—would I want to go back? Had my 40 year long dream all been worth it? You bet it was—and would I go back—In-shaallah (God Willing) in a minute!!

and part  
of which I was

George H. Brown

Assistant BRIDGE Editor Dr. George H. Brown was formerly Executive Vice President for Research and Engineering of the entire RCA Corporation. He has received many honors including Eminent Membership in Eta Kappa Nu.



## A Study of Fact and Fiction

It was my good fortune to receive a VIP invitation to view the launching of Apollo XI with the consequent privilege of boarding a NASA-provided bus at Nelbourne, Florida, at half-past five on the morning of July sixteenth, 1969. Three hours later, we found ourselves seeking seats in any one of several roofless sun-exposed bleachers along with members of Congress, a former president of the United States, and many foreign dignitaries. On the opposite side of the Vehicle Assembly Building, the super-VIP's of the press were shaded by a roof over their area. A few miles to the east stood Apollo XI with some casual wisps of steam drifting from its midsection.

Its very awesome presence, coupled with our knowledge that three very human people were already in their places for a trip to the moon, served to produce a restrained atmosphere and a sense of history in the making.

About ten minutes before the crucial moment, I wormed my way out of the bleacher and proceeded to a point a few hundred yards closer to Apollo where a number of camera-equipped VIPs had ranged them-

selves along a restraining rope barrier.

At precisely 9:32 a.m., just as advertised, flames issued from the base of the missile and spread along the surface of the earth for a few seconds until Apollo moved upward, slowly at first, but soon it ascended with greater and greater velocity, disappearing into the clouds within one minute after the first appearance of flame and the accompanying roar and shaking of the earth.

How do I know this all took place in less than one minute? A man standing next to me took a picture at the first burst of flame. I turned to him as Apollo disappeared to find him holding aloft in his right hand his exposed Polaroid picture as he stood with his eyes glued to the watch on his left wrist.

He smiled weakly and said, "I did not realize that so much could happen in a minute. I guess I didn't bring the proper equipment for the occasion."

As I walked through the crowd on the way to my bus and as I reflected on the great danger and the great adventure in store for these three brave astronauts, I heard a voice say, "Well, that's over. Now for lunch."

In the next few days, the newspaper and television reporters repeatedly told of the triumphs of the physicists who made all this possible, not recognizing that the basic scientific work had been done many years before and that the successful flight was a great engineering achievement.

I reflected that Kepler and Newton, over three-hundred years ago, did all the basic research needed for these space shots and—if they had invented television and electronic digital computers as well as developed rocketry techniques—they could have done some startling things for their times, as well as ours. These thoughts led me to do my own library researches on the subject.

I found that over one-hundred years ago science fiction came rather close to present-day reality. In 1859, Cyrano de Bergerac wrote a series for French newspapers called "The States and Empires of the Moon." Jules Verne followed in 1865 with his prophetic volume "From the Earth to the Moon in 97 Hours."

A study of this latter volume yielded this remarkable information:

1. In order to achieve the shortest path to the moon, one should aim vertically in order to catch the moon at the zenith. At the same time, the moon should be in its perigee, its closest point to the earth, at the time of impact of the vehicle with the moon. Thus as much as 31,000 miles of transit could be saved. This required that the launch be no further north than twenty-eight degrees north latitude nor further south than twenty-eight degrees south latitude, for the moon never exceeds these bounds. Jules Verne picked Tampa, Florida, for Captain McNicholl's launch site and NASA picked Cape

All night long he kept walking the floor with the baby. At 4 A.M. there was a knock on the door. When he opened it there was his downstairs neighbor holding a pair of brand-new shoes.

"Listen," he said. "While you're at it break these in for me, will you?"

She wanted a formal wedding—so father painted the gun white.

### The Three Stages of Man

The Child. "My papa can lick your papa."

The Adolescent. "Aw, Pop, you don't know nothin'!"

The Adult. "Well, according to my father..."

It may be true that there are two sides to every question, but it is also true that there are two sides to a sheet of flypaper and it makes a big difference to the fly which side he chooses.

Kennedy, both sites very close to twenty-eight degrees north latitude.

2. Jules Verne calculated the escape velocity, neglecting the friction of the earth's atmosphere, to be 24,545 miles per hour. According to NASA, Apollo XI kicked out of its 100-mile earth orbit at "more than 24,000 miles per hour."
3. On the next item, I really had to dig because of some ambiguities which I discovered in two English translations of Jules Verne's work. The Princeton University library provided the original French version. Here it is stated "Il devra être lancé le premier décembre de l'année prochaine, a onze heures moins treize minutes et vingt secondes." One is left slightly in doubt as to whether this is late in the morning or late in the evening until one encounters another phrase "a dix heures quarante-six minutes et quarante secondes du soir" which places the launch at one hour, thirteen minutes and twenty seconds before midnight on the first of December. Then one encounters "Il rencontrera la Lune quatre jours apres son depart, le quatre décembre a minuit précis." Here somebody made a mistake in arithmetic in arriving at the ninety-seven hour figure in the title of this book, for from a little before midnight on the first of December until precisely at midnight of the fourth of December is only three days plus one hour, thirteen minutes and twenty seconds for a total transit time of seventy-three hours, thirteen minutes and twenty seconds. According to NASA, Apollo XI used seventy-three hours and ten minutes from the time it was kicked out of earth orbit until it began its first circuit of the moon.

One can only conclude that there is nothing new under the moon!

Horse-owner and fancier Sissie O'Bryan came back from the Kentucky Derby with a tale about an old Louisville hostelry that traditionally named one of its rooms for the winner of the big annual racing classic. There was a Zev room, a Gallant Fox room, a Whirlaway room, and so forth. After the 1964 Derby, however, the management was reluctantly compelled to abandon the idea. Winner that year was Assault.

Variety may be the spice of life, but it's monotony that brings home the groceries.

The practical man is the man who knows how to get what he wants. The philosopher is the man who knows what man ought to want. The ideal man is the man who knows how to get what he ought to want.

Edgar S. Brightman

**MU CHAPTER, University of California, Berkeley**—The Mu Chapter had an exceptionally outstanding semester this year. We set and attained many unprecedented goals in chapter, campus, and community activities. We upgraded our exam files, upgraded our graduate school catalog collection, conducted course and teacher evaluations, and initiated twenty-eight new students. In addition, we sponsored plant trips, seminars, and fundraisers such as selling T-shirts. Mu Chapter is proud to announce that one of its professors, Richard Newton, received the C. Holmes Outstanding Teacher Award.

In efforts to improve student-faculty as well as student-student relations, pledges were required to write short essays critiquing their undergraduate experience in the College of Engineering at UC Berkeley. The essays were then compiled and sent to all faculty members. As active participants of the Student-Faculty Relations Committee, we were able to contribute to many improvements such as obtaining a new study room for students, student participation in the EE Faculty Selection process, requesting new bike racks, and reassessing courses and their unit values.

In a new wave of student cohesiveness, UCSEE, the student branch of IEEE, and HKN worked very closely this semester. We donated a microwave for all students to use, presented the HKN/UCSEE Teaching Award to one of our outstanding professors, and organized the first annual CE vs. EE football game. We also participated in Community College Day in which students from nearby colleges were encouraged to visit Berkeley.

Engineers Week was an event that encompassed the entire College of Engineering. This year HKN was very successful in organizing an event called "Name That Tune." More than sixty students participated at one time which we hope promoted and informed the rest of the campus about the field of electrical engineering and the people who are part of this profession. For the first time, the electrical engineers won the Engineers Cup

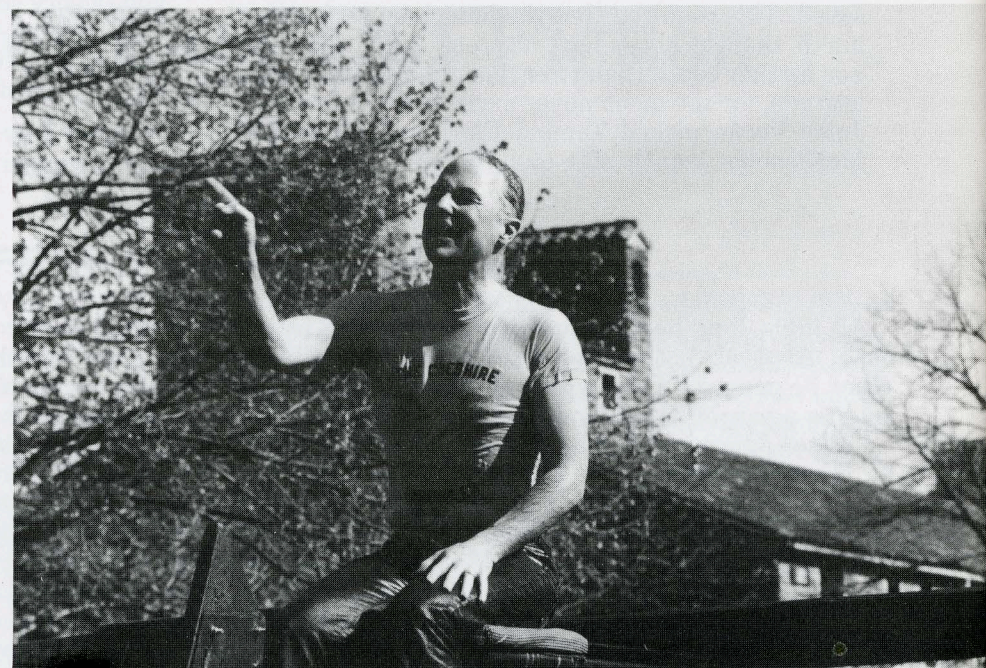
Competition for being most active. Mu Chapter has just begun to realize its strength as a student body and as an influential segment of the EECS Department. We have formed a closer bond with the faculty members as well as with the rest of the engineering societies and its members. We are looking forward to another promising semester in the Fall. by Suzanne Chu

**RHO CHAPTER, University of Colorado, Boulder**—The Rho Chapter at the University of Colorado in Boulder had an active year. Regular activities included informal and formal initiation in the fall and spring semesters. Also, as in the past, the chapter sold lab insurance to students enrolled in electrical engineering laboratory courses. Any funds remaining after covering the accidents during the year were donated back to the electrical engineering department for the purchase and repair of equipment.

Other chapter activities included a local industry tour, several pizza parties and brown bag lunch seminars. The Ball Corporation invited our chapter for dinner and a tour of their

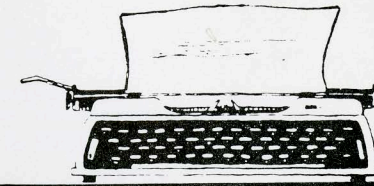
aerospace facility in Boulder. Our group was very enthusiastic about the evening and hopes that similar events can be scheduled with other local companies in the future. The pizza parties were also sponsored by local industries including Hewlett Packard, Public Service Company of Colorado, NCR, and Martin Marietta Corporation. Throughout the year, the chapter organized several brown bag lunch seminars on topics such as: hyperbaric aerobics, dragon fly flight, the control of artificial limbs and the strategic defense initiative.

The year was wrapped up by participating in the College of Engineering's annual week long "E-Days" (Engineering Days) celebration. The festivities of the week included an egg drop contest, mousetrap races, awarding the "Purple Screw" award to a "well-liked" professor, slime volleyball, a barbecue, and finally—everyone's favorite—the professor dunk tank. Our chapter advisor, Dr. William Waite, was volunteered for the dunk tank. He did a bit of taunting and subsequently got pretty wet! Joanne Waite, the Eta Kappa Nu national president, paid one dollar for three tries at dunking her husband! by Ann Kloster



**Dr. William Waite, Faculty Advisor of Rho Chapter at the University of Colorado, taunting students during the PROFESSOR DUNK-TANK event at E-Days celebration. The Dunk-Tank raises money for the celebration.**

## High Five



Shemus, newly arrived from Ireland, searched hard and long for a job in the United States. The great day finally arrived when he found employment as a bailiff in San Francisco's Chinatown area.

"Faith now, Yer Honor," confessed Shemus, "it's not a blessed thing do I know about bailiffing. what must I do?"

"You needn't worry," said the kindly judge, himself an Irishman and sympathetic to his countryman. "I'll just give you some simple orders and you merely follow my instructions."

On the first morning in court, the judge turned to his new crier and ordered him to summon an Oriental witness to the stand. "Call for Ah Song," he instructed.

Shemus looked puzzled for a moment, then shrugged and faced the spectators:

"All right now, let's look lively and trhy 'Kathleen Mavoureen'—and, if ye don't know the wurrds, hum!"

The burglar was caught in the old maid's room. "Please let me go madam," he cried. "I ain't never done nothing wrong."

"Well," she replied, "it's never too late to learn."

O. K. Kelly and Johnie O'Keefe, both rival automobile dealers, and also confirmed rivals at the Lehigh Country Club in Allentown, Pennsylvania, fought so consistently that they finally agreed not to talk to each other at all during a golf match. The outcome of this anecdote, however, depends on which one tells it. In this case, Kelly's version is presented.

After their pact of silence, they began their game. All went smoothly and silently until the sixteenth hole, when Kelly walked ahead to a ball on the edge of the green while his opponent, O'Keefe, climbed into a sand trap to play out. O'Keefe took one swing, then another, and another, finally topping a shot clear across the green and into a trap on the other side. Then he whanged the ball back into trap number one.

As he wearily recrossed the green, Kelly broke the long silence.

"Can I say just one word?"

"Well," snarled O'Keefe, "what is it?"

"I don't want to ruin your day," replied Kelly, "but you're playing with my ball!"

Consider how hard it is to change yourself and you'll understand what little chance you have of trying to change others.

"Pop" Moriarty, football coach at a small college in the hinterlands of Minnesota, had seen his charges trampled eight Saturday afternoons in a row. The last time by a humiliating score of 55 to 0. He called them to a meeting on the following Monday.

"Next week, we'll be having our last game of the season," he began bitterly. "But, we might as well forget all the trick plays I tried to teach you dimwits. We're going back to basics. Now, for lesson number one: this object I am holding in my hand is called a football. Do you understand that? I'll spell it for you: f-o-o-t-b-a-l-l."

he was interrupted by an urgent cry from the back row: "Hey Pop, not so fast!"

According to columnist Joe Fales of the *Detroit Free Press*, the athletic director of the University of Nebraska, Bob Devaney, had this wry comment:

"You've heard of the Rambling Wreck from Georgia Tech? I'm the Total Loss from Holy Cross!"

The marriage broker was hard of hearing and had to rely on his assistant during the interviewing of prospective brides. His first question always pertained to age.

"I'm young," said one applicant. "In the early twenties."

"What did she say?" he asked his aide.

"She said she was young in the early twenties," he replied.

Fishing is simplicity itself. All you have to do is get there yesterday when the fish were biting. It explains the reason why so many outdoorsmen prefer hunting. One of them was Rory Mullins, the writer. A proud father, Mullins decided to teach his little son the fundamentals of duck hunting. He took the boy along to show him how it was done—and to display his expertise.

They were safely hidden in their blind for a half-hour or so when a solitary duck flew overhead.

"Down you go," chuckled Rory, blasting away.

The duck flew serenely on.

"Son," said the quick-thinking Rory, "you are witnessing a miracle. There flies a dead duck!"

*Overheard at O'Banion's Beer Emporium:*

"Pardon me, darlin,' but I'm writin' a telephone book. C'n I have yer number?"



**Eminent Member  
Marcus Dodson**

On September 13th, 1986 the Board of Directors held an award dinner at the Marriott Lincolnshire Resort in Lincolnshire, Illinois. At this time Mr. Marcus Dodson was inducted into EMINENT MEMBERSHIP. Since Mr. Dodson is already a member of Eta Kappa Nu, the ceremony consisted of short inspirational speeches by the three members of the Executive Council. . .

Our new EMINENT MEMBER had a long and distinguished career with the Los Angeles Water and Power Co. He was educated at Berkeley where he graduated with honors.

Mr. Dodson has served Eta Kappa Nu in many ways for many years. He went through the chairs of the Los Angeles Alumni Chapter and served as President in 1970. He served as International Director in 1975-77 and International President in 1977-78. He has assisted with the Outstanding Student Award Program for the last 15 years. In 1978 he was appointed Assistant Editor of BRIDGE and has written many articles over the years. He has installed a large number of Chapters and reactivated others. Brother Dodson is well deserving of this high honor.