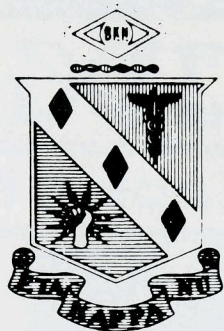


BRIDGE

Eta Kappa Nu

OCT 14 1965





WILLIAM E. MOERNER

OUTSTANDING YOUNG ENGINEER FOR 1984

Editor and Business Manager
Paul K. Hudson

Contributing Editors

Jim D'Arcy
George Brown
Marc Dodson
Oscar Dodson
Larry Dwon
Alan Lefkow
Howard Sheppard
George Swenson

NOVEMBER 1985
Vol. 82—No. 1

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.

The BRIDGE is published four times annually — November, February, May, August — and is published by Eta Kappa Nu, Haywood Printing Company, 5th & Ferry Sts., Lafayette, Indiana. Second class postage paid at Champaign, Illinois and additional mailing office. Eta Kappa Nu Association. Subscription price: three years, \$7.50; Life Subscription, \$30.

Address editorial and subscription correspondence and changes of address to: BRIDGE of Eta Kappa Nu, P.O. Box 2203, Station A, Champaign, Illinois 61820.

James A. D'Arcy
Chairman, Award Organization Committee

William E. Moerner is the Outstanding Young Electrical Engineer of 1984. The award was presented to him at the 49th Annual HKN Award Dinner in New York City on April 22, 1985. The recognition is given annually to young electrical engineering graduates for meritorious service in the interests of their fellow men as well as for outstanding achievements in their chosen profession. At the same ceremony, Stanley M. Belyeu, Cecelia Jankowski, and Robert P. Parker were awarded Honorable Mention for 1984.

Dr. Moerner is a Research Staff Member at IBM Corp., San Jose, California. He was named Outstanding Engineer for his "outstanding contributions to the field of Optical Storage Systems, for his cultural achievements, and for his involvement in the Music Arts."

Dr. Belyeu is a Systems Architect at IBM Corp., Boca Raton, Florida. He received Honorable Mention for "his contributions to the field of Robot Control Systems, and for his involvement in church and civic activities."

Ms. Jankowski is a Digital Design Engineer at Grumman Aerospace Corp., Bethpage, New York. She received Honorable Mention for "her contributions to the field of Computer-Aided Engi-

neering, and for her involvement in community and professional activities."

Mr. Parker is Director of Signal Systems at RCA Corp., Indianapolis, Indiana. He received Honorable Mention for "his contributions to the fields of Color Television Receiver Technology and Engineering Management, and for his involvement in community activities."

Three other engineers were recognized as Finalists:

- Stan R. Ciraulo, IBM Corp., San Jose, California
- Robert S. Jaffe, IBM Corp., Yorktown Heights, New York
- Hon-Wai Lam, Texas Instruments Inc., Dallas, Texas

The award winners were honored for their contributions to electrical engineering and for their contributions to society at large. Dr. Moerner was nominated by Dr. Jerome D. Swalen, Manager of Excitations in Solids at IBM Corp., San Jose, CA. Dr. Belyeu was nominated by Mr. Martin Axelrod, Vice President of Systems Product Division at IBM Corp., Boca Raton, Florida. Ms. Jankowski was nominated by Mr. Norman Lewin, Deputy Director of Engineering at Grumman Aerospace Corp., Bethpage, New York. Mr. Parker was

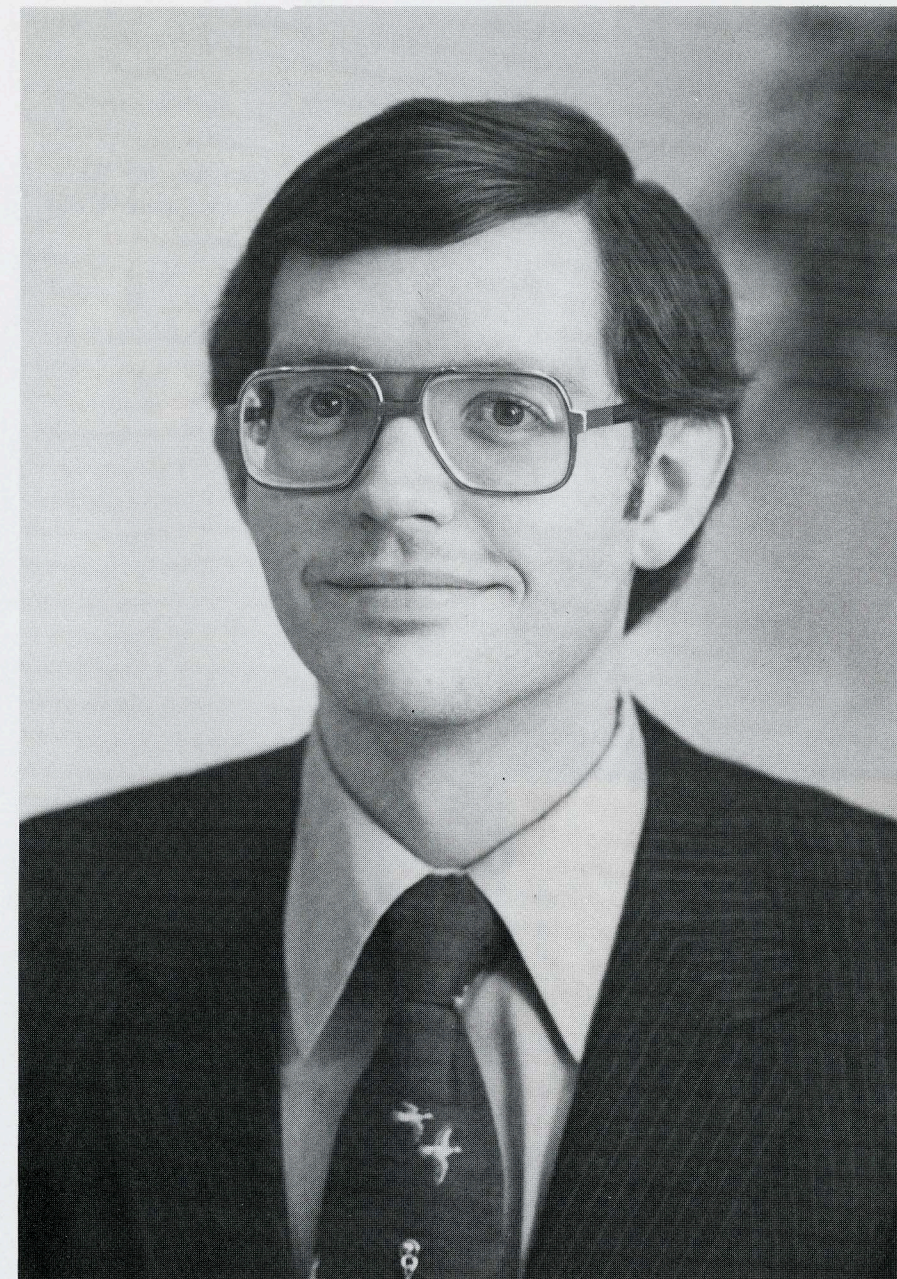
nominated by Eugene Lemke, Staff Technical Coordinator, RCA Consumer Electronics, Indianapolis, Indiana.

The Eta Kappa Nu recognition is awarded to emphasize among electrical engineers that their service to mankind is manifested not only by achievements in purely technical pursuits but in a variety of other ways. Eta Kappa Nu holds that an education based upon the acquisition of technical knowledge and the development of logical methods of thinking fits the engineer to achieve substantial success in many lines of endeavor.

The Jury of Award, appointed by the International President of Eta Kappa Nu, with the approval of the International Board of Directors, consists of two present or past officers of Eta Kappa Nu, and three or more prominent American educators or industrialists. In 1984, the jurors were:

- Mr. William A. Black, President, Indiana and Michigan Electric Co., Fort Wayne, Indiana;
- Dr. John Blair, Director of Research, Raytheon Corp., Lexington, Massachusetts;
- Mr. William Buffington, Manager of Research and Development, Avondale Division, Hewlett-Packard Co., Avondale, Pennsylvania;
- Dr. Irving Engelson, Director of Technical Activities, Institute of Electrical and Electronic Engineers (IEEE), New York, New York;
- Dr. Bruce A. Eisenstein, Chairman of Electrical and Computer Engineering Dept., Drexel University, Philadelphia, Pennsylvania; and
- Mr. Joseph B. Siedlarz, Jr., Assistant Vice President for Network Bell of Pennsylvania/Diamond State Telephone, Philadelphia, Pennsylvania.

Nominations for the award are solicited each year through the Eta Kappa Nu Award Organization Committee. Nominations may be made: by any member, or group of members, of Eta Kappa Nu; by any section or group/society of the Institute of Electrical and Electronics Engineers; by the head of the EE Department of any U.S.



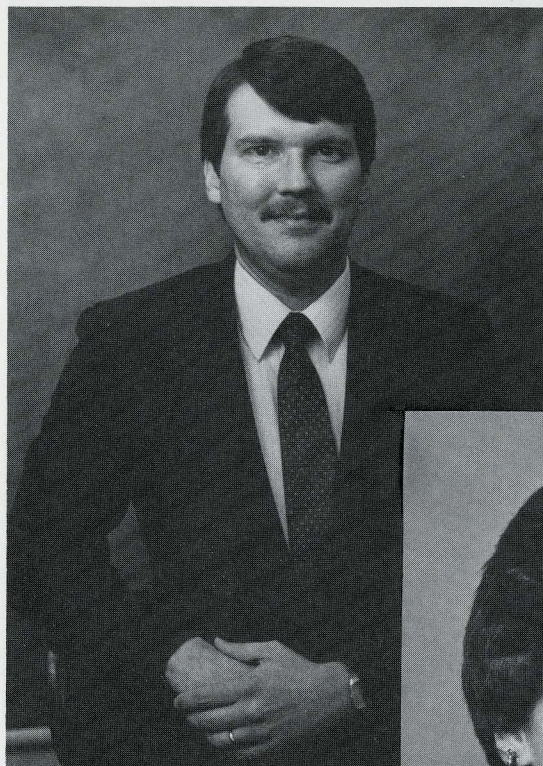
WILLIAM E. MOERNER

college or university; or by other individuals or groups, who in the opinion of the Award Organization Committee are properly qualified to make nominations.

The nominations for the 1985 awards should be submitted to the Chairman of the Award Organization Committee, or to the Execu-

tive Secretary of Eta Kappa Nu, by August 1, 1985. An eligible candidate is one who:

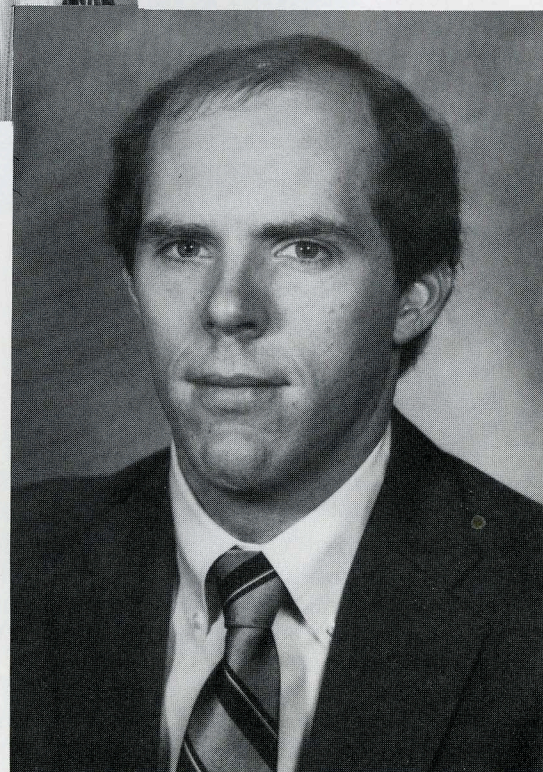
- has an electrical engineering degree (BS, MS, or PhD) from a recognized U.S. engineering school;
- will have been graduated not more than 10 years as of May 1,



Stanley M. Belyeu
Honorable Mention



Cecelia Jankowski
Honorable Mention



Robert P. Parker
Honorable Mention



JURY OF AWARD

Seated (l to r) Bruce A. Eisenstein; William Buffington; Irving Engelson; Joseph B. Seidlerz. Standing (l to r) John Blair; William A. Black; James A. D'Arcy.

1985 from a specified baccalaureate program; and
• will not yet have reached his/her 35th birthday as of May 1, 1985.

Awards are made based upon (1) the candidate's achievements of note in his or her chosen work, including inventions of devices or circuits, improvements in analysis, discovery of important facts or relationships, development of new methods, exceptional results in teaching, outstanding industrial management, or direction of research and development; (2) the candidate's service for community, state, or nation, such as activity in philanthropic, church, charity, or social enterprises, leadership in youth organizations, or engagement in civic or political affairs; (3) the candidate's cultural or esthetic

development, such as good work done in the fine arts, architecture or the drama, and the courses taken or studies made in historical, economic, or political fields; and (4) any other noteworthy accomplishments including participation in professional societies and other organizations.

The award program Recognizing Outstanding Young Electrical Engineers, is produced by the Award Organization Committee of Eta Kappa Nu. New officers of the committee, as indicated in the following list, were elected in October 1984, at the fall meeting. Their terms commenced on April 23, 1985.

The Award Organization Committee members are: Irving Engelson, IEEE (Chairman); Joseph J. Strano, New Jersey Institute of Technology (Vice

Chairman); Sheldon J. Raiter, IBM Corporation (Secretary); Clarence A. Baldwin, Westinghouse Electric Corporation; Donald Christiansen, IEEE Spectrum; James A. D'Arcy, RCA Astro-Electronics Division; Larry Dwon, Consultant (formerly American Electric Power Service Corp.); Albert J. F. Keri, American Electric Power Service Corp.; Anthony F. Gabrielle, Gulf State Utilities; Quayne G. Gennaro, Bell Atlantic Co.; Willard B. Groth, IBM Corp.; Robert W. Lucky, Bell Laboratories; George A. Mangiero, Brooklyn Polytechnic Institute; Stephen A. Mallard, Public Service Electric and Gas Co.; William E. Murray, Douglas Aircraft Co.; Ralph J. Preiss, IBM Corp.; Berthold Sheffield, RCA Corp. (Ret.); and Lawrence D. Weschler, General Electric Co.

The First Time I Saw Paris

— part six —

Art Is Long And Time Is Fleeting

by PAUL K. HUDSON
Editor — Bridge

Who was it that wrote *The Five Minute Louvre*? Benchley perhaps. Whoever it was will likely next write *The Thumb-Nail Universe*. As a matter of fact he should have written that one first because it would have been much easier. By the time I got to the Louvre I should have gotten over being overwhelmed by everything I saw in Paris, but that was not the case. Before I went there, the largest art museum I had ever been in was the Metropolitan in New York. I think you could put the Metropolitan in the first floor lobby of the Louvre. Well, not really, but that is the impression you get the first time you are there. I think some of the paintings in the Louvre are so large that if they gave one (what am I saying?) to the Metropolitan, they would have to tear out some floors to make a wall large enough to hang it.

I do not think anyone would object if I said that the Mona Lisa is the most important attraction in the Louvre. I am sure it is the most important portrait in the world. Considering the enormous size of the building, I expected to find large signs pointing the way. There were none or else I just did not see them. I had a map but it was of no use because the place was much too large for me to ever know where I was at any time. Asking directions was futile because either the people did not speak English or they did not know any more than I did.

I finally found the painting on the wall of a large gallery. It was mounted in a small glass room considerably larger than a telephone booth, so that

they could control the temperature and humidity. I had never before seen a painting receiving such tender care but, of course, I had never before seen a painting so valuable. I am sure the little room was made of bullet-proof glass or plastic. Although they were careful to control the temperature and humidity of the painting, there was not much control of the viewers. They ganged up and pushed and shoved each other to get where they could see well. I wouldn't want anyone to know this, but I did a little pushing and shoving myself until I got directly in front of the painting.

Everyone has seen reproductions of the Mona Lisa but being there in person is special. The original does not look quite the same as the reproductions. I am sure an Art expert could explain why, but I am not an Art expert. I got two first-impressions. The first one was of how small the painting is. I do not know its official dimensions but it looked to be something like a foot and a half by two feet. The second impression was of how beautiful the lady really was. Maybe she just seemed extra beautiful because she was in the Louvre instead of a book or entrance hall of a home—I can't say about that, but I stood for a long time in thoughtful reverence. Everyone was taking pictures but unless they had better cameras than I did, they did not get much. The Museum does not allow any pictures to be taken with flash cameras. I took one with my Polaroid without the flash and it was very poor.





At 11 Boulevard de la Madelein is the home where Camille—The Lady of the Camelias—lived and died.

The Mona Lisa is a portrait of Madonna Lisa Mengihini Giocondo, the wife of Zanobi del Giocondo. Her husband commissioned Leonardo to do the painting but he was never able to take possession of it, because Leonardo refused to give it up. He kept telling Giocondo that the painting was not finished. Leonardo was in love with the lady and the painting but only artistically and not romantically. We know this for certain because he was gay. He knew that Lisa, both in person and in the painting, was an artistic masterpiece. Leonardo arranged for music to be played and mime to be performed during the sittings so that her lovely expression could be captured. After he finished the painting he just kept it in his bedroom. The painting is now a half of a millennium old, yet people will still be pushing and shoving each other to get a better view of it in all of the years of tomorrow.

The most familiar tribute to the Mona Lisa was written almost a century ago by the literary artist Walter Pater. He likens Lisa, in the painting, to a living presence—an everlasting presence—a perpetual life:

"The presence that thus rose so strangely beside the waters is expressive of what in the ways of a thousand years men had come to desire.

"Set it for a moment beside one of those white Greek goddesses or beautiful women of antiquity, and how they would be troubled by this beauty, into which the soul with all its maladies has passed!"

"She is older than the rocks among which she sits; like the vampire, she has been dead many times, and

learned the secrets of the grave; and has been a diver in deep seas, and keeps their fallen day about her; and trafficked for strange webs with Eastern merchants; and as Leda, was the mother of Helen of Troy, and as Saint Anne, the mother of Mary; And all this has been to her but as the sound of lyres and flutes, and lives only in the delicacy with which it has moulded the changing lineaments, and tinged the eyelids and the hands. Certainly Lady Lisa might stand as the embodiment of the old fancy of a perpetual life."

There is nothing I could add, with my poor powers, to this lovely tribute except to say that feature writers in recent years have sometimes credited it to Andre Malraux, the French Cultural Affairs Minister. He did not write it and they did not do their homework. This tribute will be found on page 123 of Walter Pater's book *The Renaissance*, published by McMillian in 1901.

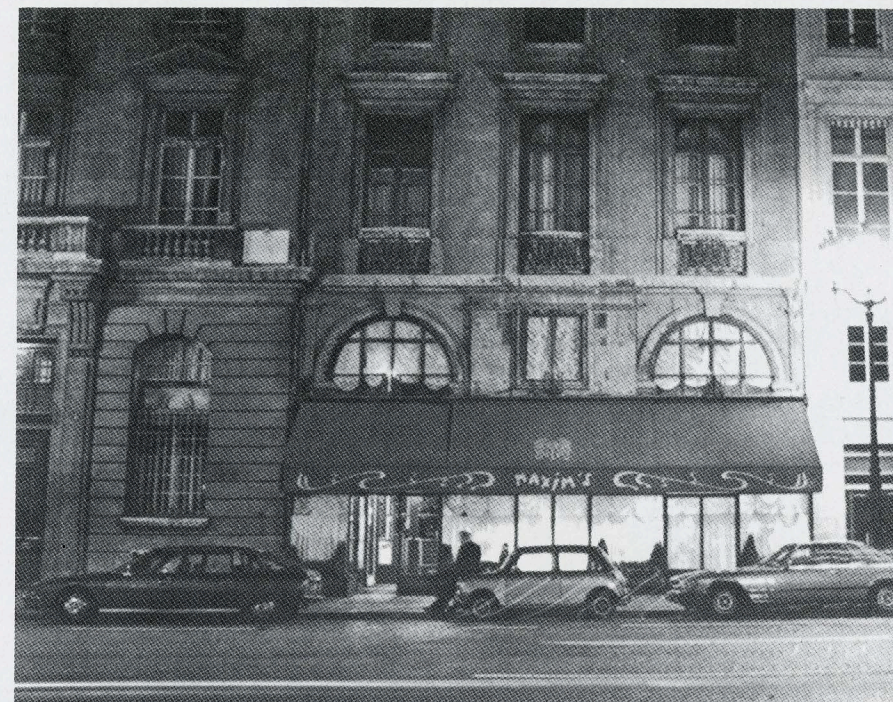
The next most important masterpiece in the Louvre is the Venus de Milo. It is in the center of the room and you are allowed to walk up as close as you wish. I took a flash picture and was promptly told-off by a lady guard. I can see why they do not want flash pictures taken of their paintings because the bright light might deteriorate them over the years, but considering what the Venus has gone through since she was created, I do not see that a little light would harm her any. But I will say this—she surely was a beautiful lady when she was created, because she is still a *looker*, even with scars and without the arms. I don't care if I never hear any more humor at her expense such as the hospital named *Venus de Milo Arms*, or the guy who dreamed of dying in Venus de Milo's arms. As I stood there looking at her I heard something that should not have surprised me but did. A young woman of about 25, turned to her husband and said, "Why didn't they want her to have arms?" When I was growing up, my mother used to have an expression that she said at appropriate times: "*How much the dunce who was sent to Rome, excels the dunce who stayed at home.*" My mother would have been the first to insist that it was wonderful that the young woman got to come to the Louvre. And, of course, we should remember that we are all dunces when we get very far out of our element. I certainly felt like one because I could not speak French to the people.

A first visit to the Louvre would not be complete without taking a look at the *Victory of Samothrace*, more often called *Winged Victory*, with cloak rippling in a wind that blew two centuries before the birth of Christ. I am not well enough trained in that field to make useful comments and, in addition, it was mounted in an awkward place in a stairway where it was difficult to view it carefully.

My favorite painter is Renoir and, of course, it would be unthinkable for the Louvre not to have

Maxim's Restaurant in Paris where Gigi was taken on her first date and where much of the Merry Widow Operetta takes place.

The orchestra here plays The Merry Widow Waltz each evening during the dinner hour.



some of his things. I like Renoir for two reasons—one artistic and the other personal. His paintings are all lovely and deal mainly with the joy and gladness of living. In addition, I admire him because when he finally got arthritis so bad in his fingers that he could not hold a brush, he kept on painting by having brushes tied to his hands. He is my kind of a guy. I have no use for the famous painters, authors, and composers who worked just long enough to become famous and then spent the rest of their lives chasing women and booze.

Speaking of the Arts, there are a number of places in Paris that are very interesting and easy to find. At 11 Boulevard de la Madelein, just a few steps west of the Opera, is the home where Camille lived and died. Her real name was Marie Duplessis—a young woman of great beauty, wit and charm. She lives forever as Marguerite of Alexander Dumas' *Lady of the Camelias* and as Violette in Verdi's *La Traviata*. (see photo). It is not possible to visit the inside of her home because it is not a museum. Maybe it will be some day.

On the Rue Royale, just off the Place de la Concorde, is Maxim's restaurant. My, what pleasant associations that place has. In Colette's famous play *Gigi*, Maxim's is the place where Gigi was taken on her first date, and she came out a winner. Also Maxim's was the setting for a good part of the play *The Merry Widow*.

ANNA:
And where, dear Count will you go?

DANILO:
Where? I?
Someplace where I feel at home.

I'm going to Maxim's,
Where love is what it seems.
The pleasures never end there,
I have so many friends there:
Lolo, Dodo, Joujou,
Cloclo, Margot, Froufrou.
They have a special talent
For making me
Forget!

I have my own personal and private joke about all of that. When I was a small boy I was sent to the home of an aunt and uncle in another town for a short vacation. One afternoon my aunt wanted to go to a movie that she said was very special and so she took me with her. I understood nothing of it—not a single cowboy or Indian in it—and the title, as I misread it on the screen at the start of the show, was bewildering—*The Merry Window*. I had never heard of a widow and did not know the word. I did not mention to my aunt anything about my low opinion of her taste in movies and it was not until several years later when I first heard some songs from *The Merry Widow Operetta* of Franz Lehar that the bell finally rang. Each evening the orchestra at Maxim's plays *The Merry Widow Waltz* several times.

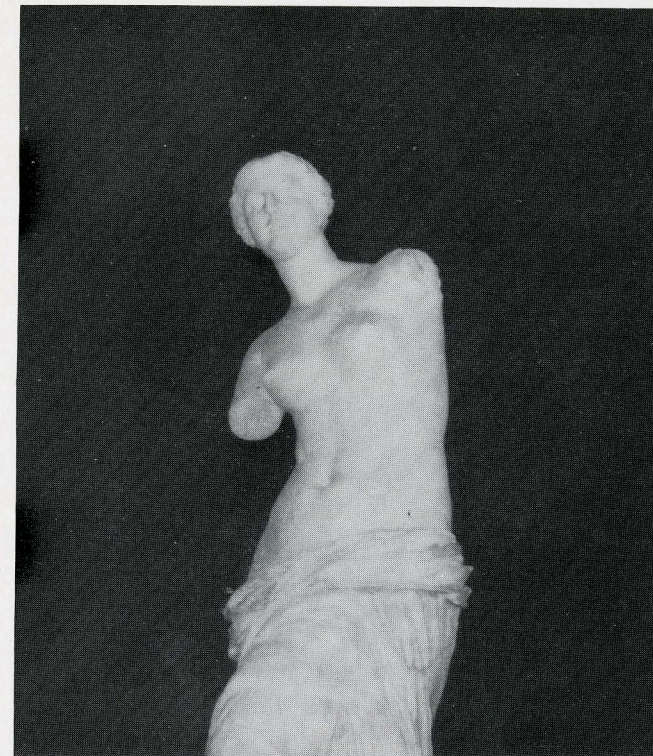
DANILO:
Strings are sighing:
"Why deny that
I love you?"

ANNA:
Now they sigh
In soft reply:
"I love you too."

DANELO:
Music says it simply.

ANNA:
Hear each loving tone:

BOTH:
"Yes it's true,
It's you, it's you
I love alone."



Venus de Milo

I do not know if they also play *Vilia*, the other hauntingly beautiful song of the Operetta, because I did not get to go. I caught a bad cold on the day I was to go and had to give it up. I couldn't see paying one hundred dollars for some food that I would not feel able to eat much of. But I really feel that I missed something important. Sir Philip Sydney once said that he could die happy if he could just eat large goose liver to the sound of trumpets. I cannot match that but it would be an unforgettable experience if I could just eat anything—graveyard stew (milk-toast) would be just fine—at Maxim's while the orchestra was playing *The Merry Widow Waltz* or *Vilia*.

One of the songs of the operetta paints a perfect portrait of *Gigi*. However, Colette wrote *Gigi* long after the operetta, so there is no relationship there except that perhaps the idea of *Gigi* had been bouncing around for a long time.

Here's a lass with a bow in her hair
And a totally innocent air
But she will foil with dispatch
Any plot you may hatch
Little man, you have met your match!
etc.

Left—Greta Garbo in her greatest role, as the fatally ill, self-sacrificing courtesan Marguerite Gautier in "Camille". The real live Camille, Marie Duplessis, lived at 11 Boulevard de la Madelein. (photo on page 8)

THE ETA KAPPA NU
COLLEGE OF
BENEFACTORS

SUPREME BENEFACTOR

Edith Ann Koerner
Paul K. Hudson
Norman R. Carson

HIGH BENEFACTOR

Boston Alumni Chapter
Chicago Alumni Chapter
Helene Koerner Gahlen
Lloyd Hunt
Fritz A. Koerner
Eugene Mueser
Joanne Waite

BENFACTOR

Glenn D. Baker
Marc Dodson
Delta Nu Chapter
Frank B. Doyle
Gerald E. Dreifke
Larry Dwon
Margaret K. Goodrich
Robert H. Greenfield
Irma Hanson
Fred Harrell
Floyd K. Harvey
Edward Jordan
Everitt S. Lee
Alan Lefkow
Russell E. Lueg
William R. Mayben
Omicron Chapter
Sydney R. Parker
Donald S. Pearson
Thomas Rothwell
Lindon Saline
Vivian Rothwell
Howard H. Sheppard
Alan R. Stoudinger
Marian Warren
Thomas W. Williams

University of Hartford

by Alan Lefkow

The University of Hartford is located in the Capitol Region of Connecticut and serves as the focal point for nearly 4000 full-time undergraduate students. It was founded in 1877, when the first of its three original schools, the Hartford Art School, was established. Hillyer College (1879), and the Hartt School of Music (1920) joined the Hartford Art School in 1957 to form the University of Hartford.

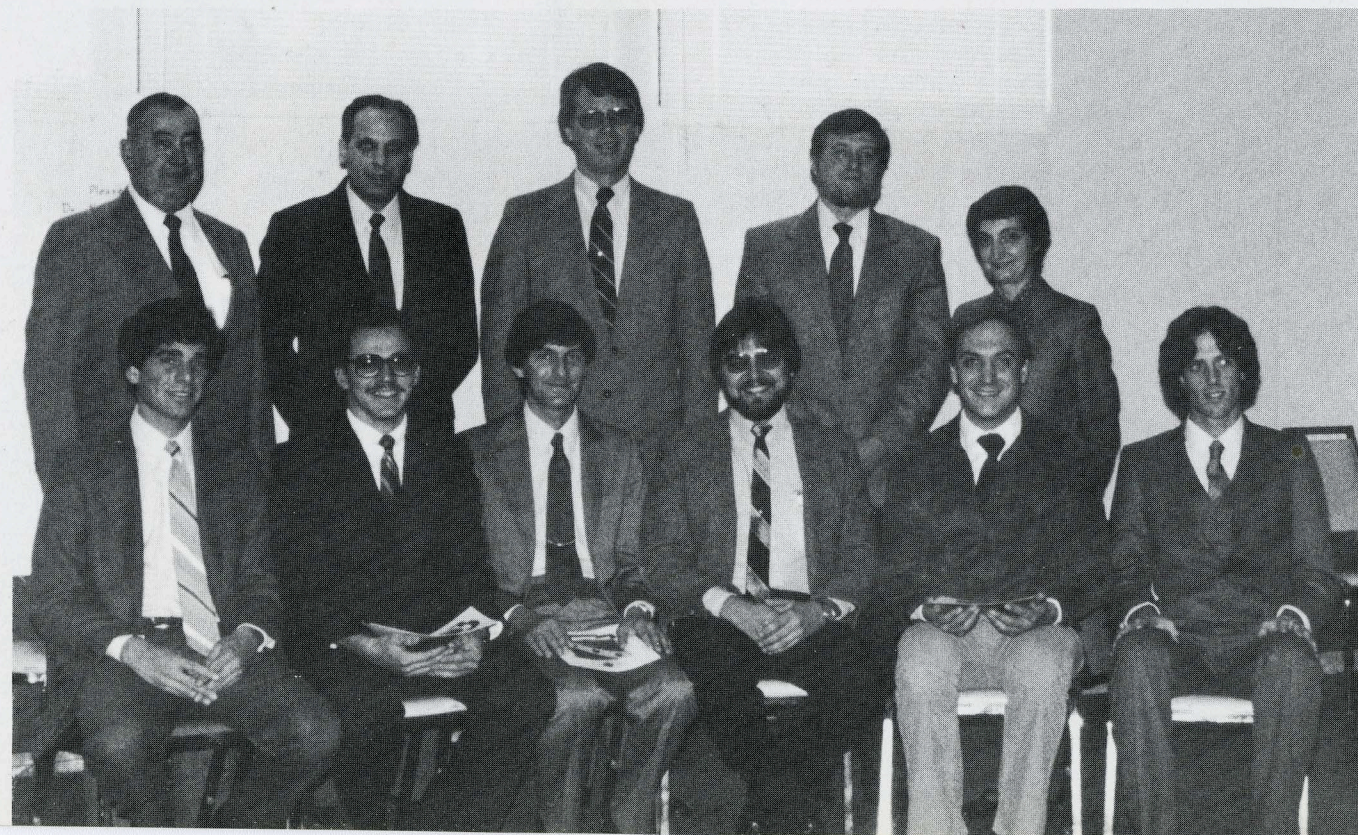
The College of Engineering at the University offers degree programs in electrical, mechanical, civil, and computer engineering. Over nine hundred undergraduate students are enrolled in the College, which includes the Department of Electrical Engineering.

Although there are many technical societies on campus, it was Prof. Richard Donovan who spearheaded the formation of the first Eta Kappa Nu chapter at the University. His efforts came to fruition on November 3, 1984, when Iota Epsilon, the 167th chapter of Eta Kappa Nu, was installed at the University.

National Vice-President-elect Alan Lefkow represented National Headquarters as the installing officer. The installation was held on campus, preceded by a fillet-mignon luncheon that splendidly set the mood for the ceremony to follow. About 35 carefully selected

electrical engineering students came to be inducted into the new chapter. Dean Lewis Walker and Prof. Louis Godbout, Jr., of the College of Engineering, assisted Mr. Lefkow and Prof. Donovan in conducting the ceremony. At the end, Mr. Lefkow presented the Charter of Iota Epsilon to the University, accepted by Provost Carol Guardo.

Prof. Donovan will be the new Faculty Advisor of Iota Epsilon. The student officers have been elected and the chapter is on its way. All of Eta Kappa Nu welcomes Iota Epsilon Chapter into the association and wishes them the best of luck for a bright future.



California State—Chico

by Chris Parady

California State University, Chico has a reputation among the California State Universities for its Electrical/Electronic Engineering program, and now has a chapter of Eta Kappa Nu also. The charter for the Iota Zeta Chapter was presented to the university by Mr. Marcus Dodson (past president of HKN) at the annual engineering awards ceremony held on February 22.

Prior to the banquet, the initiation ceremony was held in which twenty students and five professional members were initiated into the society. Participating in the ceremony were Mr. R. J. Kennerknecht from General Dynamics Corp., Mr. Marcus Dodson, and CSU, Chico professors Dr. Philip Hoff, Dr. Harold Peterson, and Dr. Lawrence Getgen.

Installed as the first officers for the chapter are: Chris Parady, President; Tom McKnight, Vice President; Charlotte Foster, Treasurer; Keith Lowham, Recording Secretary; Tim McShane, Corresponding Secretary; and Matt Nelson, Bridge correspondent.

Already busy on campus, the Iota Zeta Chapter has undertaken the task of up-dating the departments reference library, and also selling class schedules to engineering students for upcoming classes.

L to R—Chris Parady, Chapter President; R. J. Kennerknecht, Past Director; Richard Bednar, Department Chairman; Marcus Dodson, Past President; Tom McKnight, Chapter Vice President.



The Last Hours Of The Hornet

OSCAR H. DODSON
Rear Admiral, U.S. Navy (Ret.)

Assistant Bridge Editor Oscar H. Dodson, as a Naval officer, participated in thirteen major naval engagements in the Pacific in World War Two, including the battles of Midway, Guadalcanal, and the Philippine Sea. He was serving as Communication Officer in the aircraft carrier *Hornet* when it was sunk by the Japanese. Presented here is a first-hand account of the loss of this ship in the bitterly fought battle of Santa Cruz. (Editor)



This is the record of a valiant ship whose life span was one year and seven days.

The keel of the Aircraft Carrier *Hornet* was laid on 25 September, 1939, just twenty days after the outbreak of the Second World War. In a furious spurt the ship was rushed to completion. She was launched on 14 December, 1940, and commissioned by Secretary of the Navy Frank Knox on 20 October, 1941, in Norfolk, Virginia. The *Hornet's* first Commanding Officer, Captain Marc A. Mitscher, was an eminent naval aviator.

Immediately after the distinguished visitors had departed, following the Commissioning Ceremony, the ship held Fire Drill, Collision Drill, and General Quarters to permit a new and totally inexperienced crew to exercise in emergency drills and at battle stations. Seventy-five percent of the personnel were aboard their first ship. This included 700 graduates of "Boot Camp" at Great Lakes Naval Training Station in Illinois, who arrived in *Hornet* just in time for the Commissioning Ceremony.

Forty-nine days after commissioning of *Hornet* the Imperial Japanese Navy launched a Pacific-wide surprise attack on Pearl Harbor, the Philippines, Guam, Midway Island, Hong Kong and Malaya.

With the U.S. Pacific Fleet heavily outnumbered by Japanese aircraft carriers, it was imperative that *Hornet* speedily complete her fitting-out period and shakedown cruise, in order to swiftly reinforce the Pacific forces.

Accordingly, the *Hornet* was allocated five weeks for shakedown training in the Caribbean. At four a.m. each morning "flight quarters" was sounded. At morning twilight, planes were launched for training

flights which lasted until sunset. While the Air Group was airborne, the ship's gun crews practiced daily, firing on helium balloons and towed target sleeves.

In the ship's Communication Office, the Radio Room and the Coding Room, the eight young Communication Watch Officers, several less than a year out of college, exercised daily in the encryption and decoding of the secret and confidential codes and ciphers which the ship was authorized to use. These communication exercises as well as emergency signal flag drills by the Signal Force were supervised by the writer, who was serving as the ship's Communication Officer.

By 31 January, 1942, the *Hornet* was safely back in Norfolk, correcting minor problems in equipment and receiving a few of the latest types of planes. The wartime camouflage was applied, and additional 20 mm guns were installed.

Late in February the *Hornet* departed Norfolk and joined a large merchant convoy headed for Australia. After passage through the Panama Canal the *Hornet* operated briefly off San Diego, training Air Groups for other carriers.

The Commissioning Ceremony of the "Hornet" at the Norfolk Navy Yard on 20 Oct. 1941.

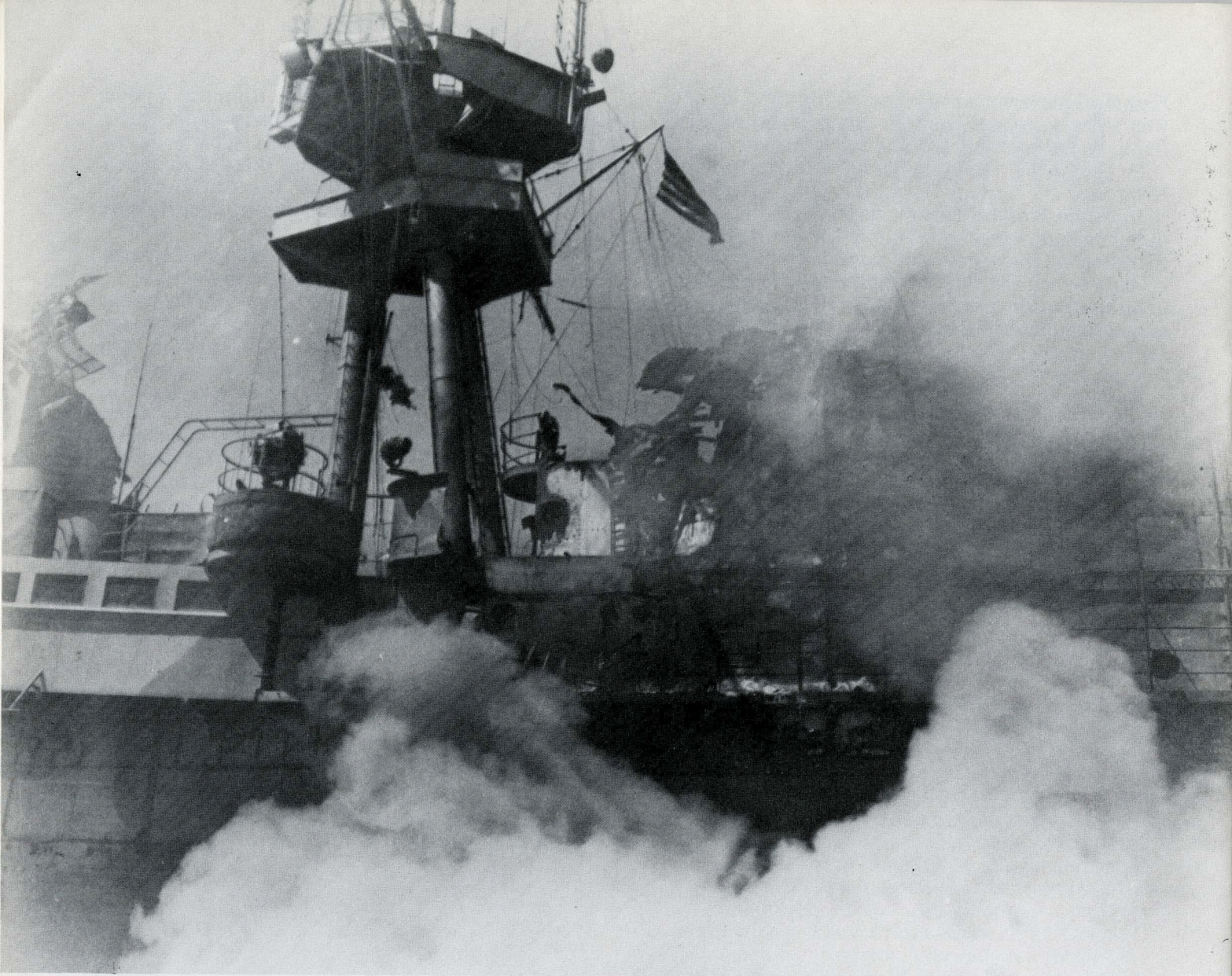
On April 1, at Naval Air Station Alameda, in San Francisco Bay, to the complete surprise of the ship's officers and crew, the *Hornet* hoisted on board sixteen B-25 Army bombers. These were the planes which *Hornet* would launch, under the command of Lieutenant Colonel James H. "Jimmy" Doolittle, for the famed raid on Tokyo.

The details of this raid, which amazed and stunned the Japanese, will be covered in a future article.

After the Tokyo Raid, the *Hornet* spent five days in Pearl Harbor, before joining the USS *Enterprise* for a fast trip to the South Pacific. Unfortunately this Task Force was a thousand miles distant when the *Lexington* and *Yorktown* turned back the Japanese in the Battle of the Coral Sea. Following this battle, fires on board forced the loss of the *Lexington* on 7 May. American planes from the two carriers sank the Japanese carrier *Shoho*, inflicted massive damage on the *Shokaku* and almost wiped out the *Zuikaku's* Air Group. The *Zuikaku* was unable to train new pilots in time for the Battle of Midway.

The *Hornet* task force returned to Hawaii, but leave and liberty were cancelled after two days as U.S. Naval cryptographers decoded Japanese secret naval dispatches indicating a massive Japanese fleet





The Japanese dive bomber crashed into the "Hornet" at center right and then bounced over into the Signal Deck at center left, where one of its bombs exploded. Twelve signalmen of the "Hornet" were either killed instantly or burned to death by the flaming gasoline.

headed for the capture of Midway Island.

On 28 May the *Hornet* and *Enterprise*, as units of Task Force 16, departed Pearl Harbor and headed for an historic rendezvous north-east of Midway in a battle plan which would take the Japanese carrier force by complete surprise. Japanese Intelligence had estimated that any American carriers at sea would still be in the South Pacific.

The *Yorktown*, severely damaged at the Coral Sea, was under repair at Pearl Harbor. In an amazing achievement the Pearl Harbor shipyard personnel, working around the clock, repaired the damage in three days. (The original estimate for repairs was 90 days.)

Yorktown quickly joined *Hornet* and *Enterprise*. To protect the carriers, American units included eight

cruisers, seventeen destroyers, and two oilers. Nineteen American submarines were concentrated in the battle area.

The Japanese forces, divided into four separate groups, included six carriers, three seaplane carriers, eleven battleships, fourteen cruisers, forty-six destroyers, sixteen submarines and a number of auxiliary vessels.

In the action at Midway, on 4 June, the *Hornet* pilots and airmen of Commander Johnny Waldron's Torpedo Squadron Eight thundered down the flight deck into their last morning sky. Flying low, heading straight for the enemy carriers, Waldron's torpedo planes sucked down the defending Japanese fighters, giving *Enterprise* and *Yorktown* dive bombers a free sky to release bombs which sent the Japanese carriers *Akaga*, *Kaga* and *Soryu* to flaming graves.

From the attack of Waldron's squadron, no planes returned; one pilot, Ensign George Gay, survived. The *Hornet* crew whispered that in the Valhalla of Naval Immortals, John Paul Jones and Stephen Decatur had embraced Johnny Waldron.

Before receiving her fatal blow, the remaining Japanese carrier, the *Hiryu*, launched a desperation

air attack which severely damaged the *Yorktown*. This carrier was lost the next day.

With his four carriers, and many veteran aviators lost, the Japanese Fleet Commander, Admiral Yamamoto, cancelled the attack on Midway and commenced withdrawing to the west.

On 5 and 6 June, *Hornet* and *Enterprise* planes, searching for damaged Japanese ships, sank the heavy cruiser *Mogami* and heavily damaged the heavy cruiser *Mikama*.

On 13 June, *Hornet* arrived in Pearl Harbor. The ship's new commanding officer, Captain Charles P. Mason, relieved the first "skipper," Captain "Pete" Mitscher, who was promoted to Rear Admiral.

Hornet was selected as flagship for Rear Admiral George Murray, a former commanding officer of the *Enterprise*.

When Admiral Murray arrived in *Hornet* his newly formed staff did not include a Flag Communication Officer. The Admiral requested that the writer double as both Flag and Ship Communication Officer. These duties gave me a choice of three battle stations: the Flag Bridge with the Admiral, the Pilot House with the Captain, or the Signal Bridge. Since all three stations were concentrated in the Island superstructure, where ship and air operations were controlled, it was easy to rotate among the three locations.

After a period of rest and relaxation the *Hornet* departed Pearl Harbor on 17 August for the South Pacific, on what would be her final voyage.

Early in August the Marines had invaded Guadal-

The last hours of the "Hornet". There is an 18 degree list and the ship is on fire from the many bomb hits.

canal. The Japanese were concentrating naval air and army forces to drive the Marines from the island.

In the fall of 1942, to the highly aggressive Japanese in the South Pacific, the Navy would lose twenty-four ships.

During this cruise my life was enlivened by the arrival on board of three eminent War Correspondents representing American news services, newspapers and magazines. Tom Lea, John Hersey and Dick Tregaskis brought their news items to me for censorship. We became warm friends. All three had departed for other assignments before the day the ship was lost.

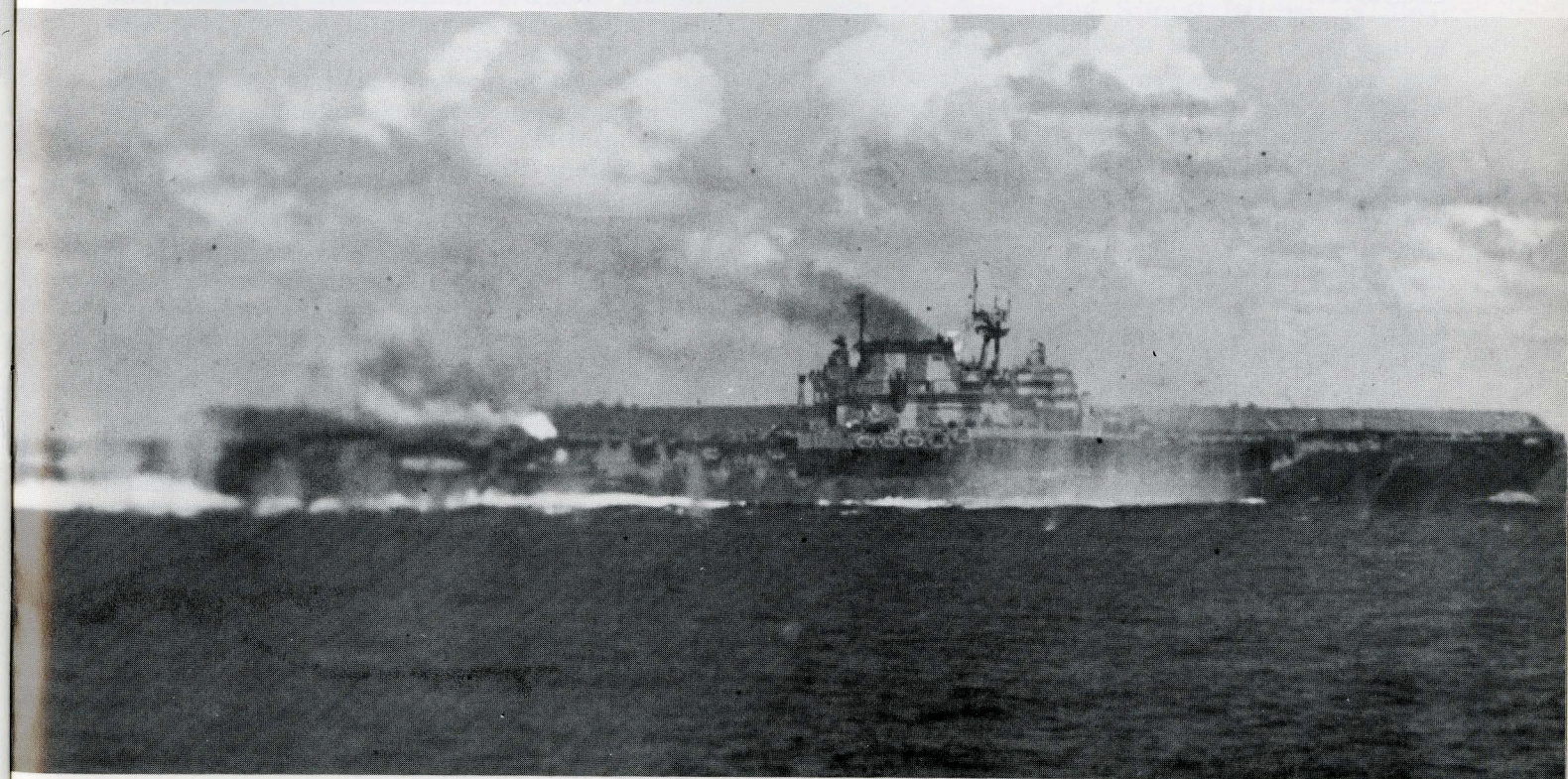
Hornet delivered Marine 4F4 fighters to Henderson Field in Guadalcanal, then joined the carriers *Wasp* and *Saratoga* in a patrol west of the Solomon Islands. On 31 August a Japanese submarine torpedo hit forced the *Saratoga* to withdraw for repairs.

On 15 September *Hornet* and *Wasp* were escorting a convoy of reinforcements for Guadalcanal when the *Wasp* received three Japanese submarine torpedo hits. Fires quickly raged out of control. The *Wasp* was abandoned. A flaming wreck, the carrier was sent to the bottom, torpedoed by our escorting destroyers.

Hornet recovered all *Wasp* planes. With the *Enterprise* still under repairs from damage by Japanese dive bombers in August, the *Hornet* was now the only undamaged American carrier in the Pacific.

Hornet for months had been a special target for the Japanese, who still were humiliated by Doolittle's raiders.

The *Hornet* arrived in Noumea, New Caledonia late in September. Supplies were brought on board, including food which eliminated an unchanging



menu of spam, rice, and raisins; and, to the delight of all hands, seventy bags of long-overdue mail were delivered.

After six days in port *Hornet* departed Noumea to attack Japanese air fields and ships in the Shortland and Bougainville Island area. The lone carrier was protected by four cruisers and six destroyers. On this mission *Hornet* planes sank several enemy cargo vessels, forcing other Japanese vessels to disperse to the north.

On 16 October *Hornet* planes attacked a Japanese float-plane base at Rekata Bay, destroyed sixteen planes and inflicted heavy damage on shore installations.

On 18 October the *Hornet* welcomed the return of the repaired *Enterprise* to the South Pacific.

On 20 October the *Hornet* officers and crew celebrated the ship's first birthday. A festive noon meal was prepared, including platters of fried chicken, ice cream, and a huge birthday cake sporting one glimmering candle.

Officers and crew were intensely proud of this ship. In a year at war she had steamed seventy-six thousand miles, fourteen miles for every hour in commission. The martyrdom of *Hornet's* Torpedo Squadron Eight had turned the tide at Midway, a defeat for the Japanese from which, according to their own naval authorities, they never recovered.

On 24 October *Hornet* and *Enterprise* sailed to the east of the Santa Cruz Islands to attack a larger Japanese force which was headed south to support their island forces.

The *Enterprise* Task Force, under Rear Admiral Kinkaid, included one battleship, two cruisers and eight destroyers. The *Hornet* force, under Rear Admiral Murray, included four cruisers and six destroyers.

It was estimated that the Japanese force included at least three carriers. We now know that this force was composed of four carriers, four battleships, ten cruisers, thirty destroyers and twelve submarines.

The usual preparations for battle were made on October 25. Torpedoes and 500-lb. and 1000-lb. bombs were loaded in the Air Group planes. Fire control equipment was exercised and ready ammunition was verified at each gun mount. All fire-fighting equipment was double-checked, fire buckets filled with water or sand. Officers and men checked steel helmets, flashproof clothing, life jackets and shark knives. First Aid boxes were inspected. Officers were issued morphine to ease the pain of the wounded. Food was assembled for the day of battle, doughnuts, canned pineapple, mince pie and coffee. Last letters were written and Chaplain Eddie Harp played softly on his organ.

At sunset when the ships went to battle stations to guard against a twilight submarine attack, my most treasured possessions, a miniature portrait of my wife Polly in her wedding dress, a snapshot of my son John, an autographed photo of Johnny Waldron, who died at Midway, and my collection of old coins were carefully packed in a briefcase and left at my battle station on the Flag Bridge.

On the morning of October 26, shortly after 5 a.m., an *Enterprise* search plane sighted a large enemy surface force. Immediately the *Hornet* was ordered to launch an attack. The carrier turned into the wind, increased speed, and launched fighters, dive bombers and torpedo bombers. Within forty minutes fifty-four *Hornet* planes were in the air, headed for the enemy force. The *Enterprise* attack group was also streaking to the north toward the enemy.

From *Hornet's* outgoing attack group came a sharp radio voice warning, "Two large bogies headed your way angels 12," indicating Japanese planes approaching at altitude 12,000 feet.

In the *Hornet*, General Quarters sounded. From the loudspeaker came the command, "All hands man your battle station, stand by to repel air attack." Men scrambled to gun stations, donned flashproof clothing, life jackets, gas masks and steel helmets. The ship turned quickly into the wind to launch all available fighters. The *Hornet* and *Enterprise* fighters in Combat Air Patrol over the carriers sped out to intercept the incoming enemy raid.

With all fighters launched, the ship's gasoline system was blanketed with CO₂, all watertight doors were closed, and the *Hornet* was fully ready for battle.

In the *Hornet* radio station the voice of the lead fighter pilot was heard, "Tally-ho-hawks-angels 17," reporting sighting and attacking enemy dive bombers at altitude 17,000 feet. On the distant horizon grey and black streamers of smoke descended from clouds, then billowing black smoke appeared on the water as enemy planes were "splashed."

Enemy dive bombers broke through the defending fighters, weathered the gunfire of the *Hornet's* protecting screen of cruisers and destroyers, and approached the carrier from astern. From the bridge Captain Mason called the Chief Engineer, "Give us all the speed you have—dive bombing attack coming in." *Hornet's* five-inch batteries opened up, followed by the 1.1 and the 20mm machine guns.

With engines straining at full speed plus, the *Hornet* commenced radical evasive maneuvering which attempted to slide out from under enemy planes after they were committed to their dives. A flaming plane plunged in, a near miss to starboard. Two large bombs, near misses to starboard, threw up geysers of grey water. A dive bomber, bombs in racks, machine guns blazing, dove vertically into the stack, glanced off, crashed through the Signal Bridge deck. Fragmentation bombs exploded. Observing the attack from the Signal Bridge, we realized this incoming plane would not pull out, but it was too late to take cover.

With this plane crash the Signal Bridge was showered with flying metal fragments from one of the wing bombs and with burning gasoline.

Even though they had taken shelter, about twelve signalmen were either fatally wounded or drenched with flaming gasoline. The frantic efforts of three of us who were uninjured to beat out the flames on others, or rip off their burning clothing, were not

The Japanese torpedo bomber has just launched a torpedo at the "Hornet". A minute later the plane was shot down.

successful. My own gloves caught fire. Removing my gloves, I was almost helpless—we could only watch in horror as the flames on burning shipmates brought a swift and merciful death.

When the plane struck, my body was shielded by one steel leg of the tripod signal mast.

Two five-hundred pound bombs hit aft, killing thirty men at gun batteries and in the hangar deck.

The loudspeaker announced, "Dive bombing attack completed, stand by for torpedo attack." Gun crews quickly shifted to pick up new targets. Enemy torpedo planes wove in from all directions, released their brightly colored torpedoes, then continued on in to strafe the ship. An enemy torpedo plane, low over the ship, was hit, commenced smoking, made a tight circle, lost huge hunks of the plane from gun fire as the pilot dove to a fiery death into the hangar deck. A torpedo plane, retiring, was hit. With one engine in flames, the plane turned back, plunged into the ship from ahead. The plane disintegrated, the pilots ended up burning in the forward plane elevator pit.

The ship took two torpedo hits in quick succession on the starboard side. An avalanche of sea water and fuel tank oil poured through a huge hole into the Forward Engine Room. The fuel oil struck superheated steam lines, filled the engine room with gas and smoke.

The Damage Control officer commenced counter-flooding to correct a seven degree list to starboard.

Of the estimated twenty-seven planes which attacked the *Hornet*, a known twenty-five were shot down in flames, some by *Hornet* fighters, others by

Hornet guns, and by the deadly barrage of anti-aircraft fire thrown up by vessels in *Hornet's* screen.

With dive bombing and torpedo attacks completed, the *Hornet* with forward engine room and two firerooms flooded, had lost all propulsion, and all power systems within the ship. With fire main pressure lost, major fires raged on the signal bridge, the flight deck, the hangar deck amidships and aft, in Number Two Ready Room, the Chief Petty officer quarters, in storerooms, in berthing compartments and in the Number One elevator pit.

On the devastated Signal Bridge, medical personnel and fire-fighters quickly arrived. They aided surviving signalmen in putting out fires in burning signal flags. One signalman, still bleeding, signalled to nearby ships by semaphore, "We are ready to receive messages."

A young signalman, age sixteen, who had enlisted at age fifteen, pretending to be older, burned and wounded, asked, "Sir, am I being brave enough?"

The Signal Officer, Lieutenant Robert Noone, badly burned and with a shattered leg, refused medical treatment until all his surviving signalmen had been assisted. He wondered if his injuries would prevent his becoming an aviator at Pensacola.

To fight the fires, destroyers came alongside, passed over fire hoses. A thousand men quickly formed old-fashioned village bucket brigades. Buckets on ropes were lowered to the sea, brought up to deck, passed along by hand. The sea water, mixed with foamite powder, was effective at the scene of the fires. The crew had all fires under control within an hour and out in two hours.

In the attack, all five Battle Dressing Stations for emergency medical treatment were destroyed. Of the ship's four doctors, one was dead, another had been literally blown through a sheet metal bulkhead by a bomb blast. In a state of shock he insisted on

aiding other wounded, was assigned to passing out a ration of bourbon to those injured who requested it.

Surviving medical corpsmen went to all parts of the ship to render first aid. Tannic acid jelly was applied to burns, the disabled were carried by stretcher to the stern area of the ship, where an emergency first aid station had been established. On the stern Chaplain Harp had commenced burial services for the dead, repeating from memory, "Yea though I walk through the valley of the shadow of death, I will fear no evil, for thou art with me."

The *Hornet*, dead in the water, was taken in tow by the cruiser *Northampton*.

By 3:50 p.m. the seriously wounded and 800 excess personnel had been transferred to destroyers; the dead, encased in snow-white sheets, had been committed to the sea; the engineering force was working tirelessly to raise steam in undamaged boilers; and the *Northampton* with the *Hornet* in tow was making four knots and headed south toward the nearest repair base in the New Hebrides Islands.

Hornet dive bombers had fought through Japanese fighter interception to hit the carrier *Shokaku* with six 1000-lb. bombs and the heavy cruiser *Chikuma* with three bombs, placing both ships out of action for several months. The *Enterprise*, also damaged but with the flight deck operational, had recovered the *Hornet* air group, plus its own, and was also retiring to the southward. The chances of saving the *Hornet* appeared favorable.

During this lull, I recalled my briefcase. On the charred bridge the leather briefcase was found, smudged and cracked, but the contents were undamaged.

A few minutes after four o'clock the ship's battery-powered radio receivers, and emergency flag hoists from escorting cruisers and destroyers, warned of closing enemy planes. From starboard six torpedo planes approached in a fast, weaving glide. Quickly taken under fire, five of the crews went down in flames, but not before the plane which survived and one of those shot down had launched torpedoes at our carrier. From their wakes it was clear that both torpedoes were running straight, hot and normal, headed directly for the *Hornet*. With the incoming attack, the *Northampton* had cast off her tow line to get clear, leaving the carrier almost dead in the water. The torpedoes hit with a dull roar, opening additional starboard compartments to the sea. The list of the ship increased to fourteen degrees, then to eighteen. It appeared she might keep going and roll over. Captain Mason ordered, "Abandon ship."

Officers and men who had fought seven hours to save the ship quietly removed their steel helmets and shoes, adjusted the shark knives swinging from their belts, and went down the ropes from the flight deck, hand below hand, to the water.

At this time my major responsibility was to insure that the ship's codes and ciphers were secure and would not fall into Japanese hands. The Coding Room where all of the ship's Top Secret, Secret, and Confidential codes and ciphers were stored, was below decks.

Since the ship had lost all power, below decks all was in darkness. However, with a powerful lantern, our four-man search party groped through wreckage to discover, to our consternation, that the unexploded 500-pound Japanese bomb from the suicide plane had come to rest, leaning against a bulkhead, about ten feet from the door to the Coding Room.

We returned top-side to daylight and sought advice on this bomb from our Gunnery Technician. His advice was helpful, but it did not relieve our deep anxiety. "Go right to the bomb and check it," he said. "If it is not smoking and is not ticking, then it probably is a dud and will not suddenly explode."

The four of us returned to the Coding Room, opened the door, and commenced hauling out mail pouches loaded with code books and lead weights which had been placed in each bag to insure sinking when thrown overboard. The slanting decks from the ship's eighteen-degree list, were also slippery from a mixture of foamite and water which had been used earlier to fight numerous fires. It was extremely difficult to haul ten bags, each weighing about seventy pounds, up darkened, slippery, slanting decks to a hangar deck opening where the bags could be thrown overboard.

While hauling these bags to the "Toss overboard" location, we discovered that the water directly under our tossing location was crowded with men who had just abandoned ship. Waiting for occasional clear water directly below us, it required about thirty minutes to toss all bags overboard.

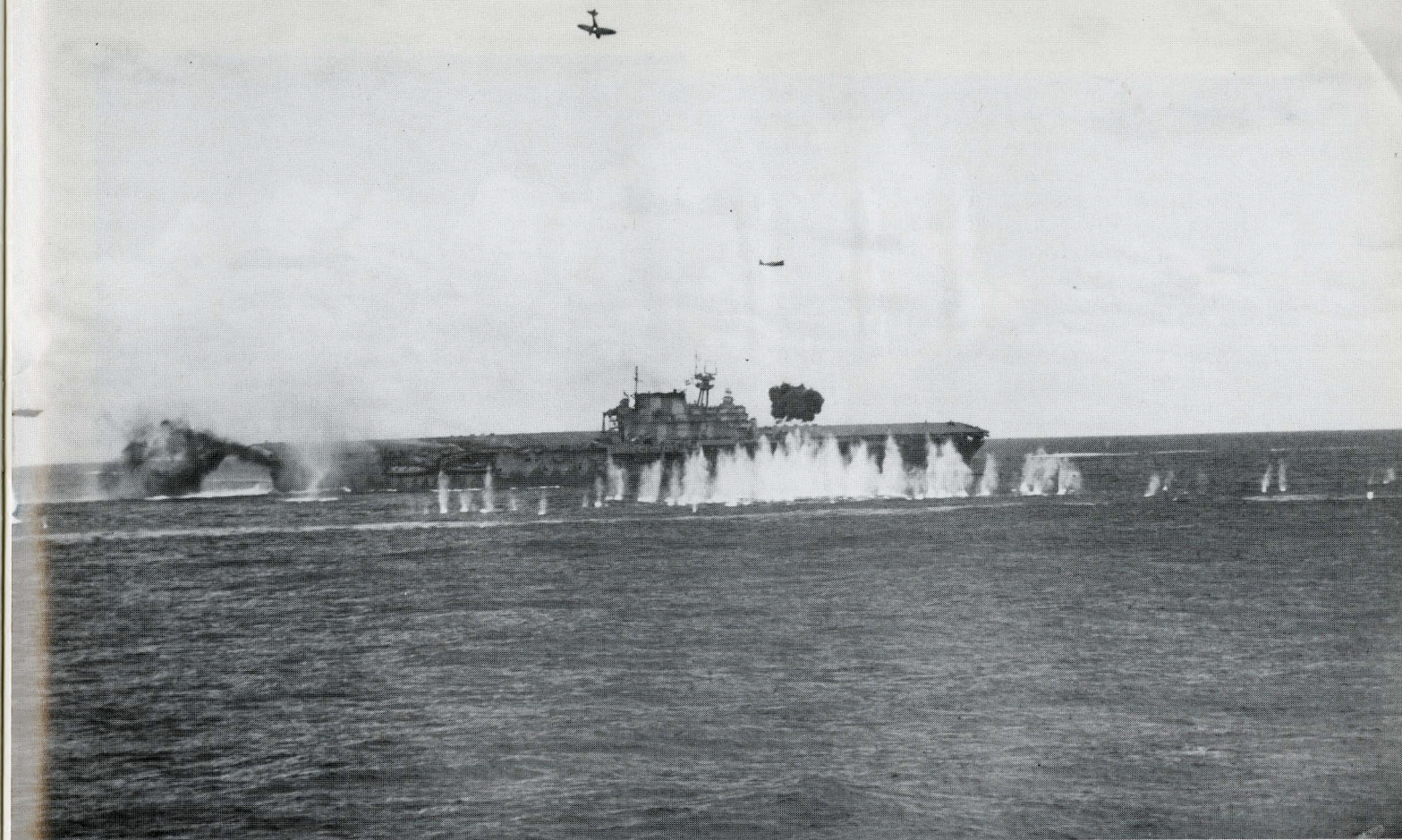
Going to the flight deck to go down a rope to the water, I met the Captain. In surprise he exclaimed "Damn it, Dodson, what are you doing still on board? Get off the ship, so I can." My reply: "The codes and ciphers are secure, Sir. Good luck."

With the orders to abandon ship, hospital corpsmen were dispatched to all accessible spaces in the ship in a final search for wounded.

With the ship's codes and ciphers secured, my thoughts turned again to my briefcase. Racing to the bridge, I located the roasted briefcase and carried it to the abandon ship stations on the Flight Deck. Hundreds of men were in the water, moving slowly away from the ship. A radioman, ready to abandon ship, glanced at the sky, leaped to a nearby unmanned machine gun, opened fire. Coming out of cloud cover, six planes were approaching for a horizontal bombing attack.

The bombs were released, dropped in a tight pattern, made two hits and started new fires aft where Chaplain Harp had just completed his burial services.

Our destroyers, waiting to pick up survivors, were in a circle well clear of bomb drops, about two miles from the stricken *Hornet*. Suddenly to me the ocean appeared to be immense, the rescuing destroyers far away and my briefcase weighted with lead. It was evident that a swimmer, carrying a briefcase, would never reach the nearest destroyer before darkness. The briefcase with my treasures was placed neatly at right angles to the edge of the deck, parallel to and alongside my two shoes.



The "*Hornet*" under heavy attack by Japanese planes.

Leaving a ship which has been a home is more trying than saying goodbye to a dying friend.

In this engagement the *Hornet* lost 111 men killed and 108 wounded.

During darkness the stars and two Japanese destroyers observed the *Hornet's* final plunge, in 2700 fathoms, off the Santa Cruz Islands.

Returning to our survivors, in the water each man was wearing a kapok life jacket, dark socks to avoid attracting sharks, and a long blade shark-knife attached to his belt, in case sharks should appear.

Survivors gradually clustered in small groups. Six of us were swimming together. The thought occurred to me: if a hungry shark appeared he had a choice of twelve legs, instead of my two.

Our swimming group came upon a downed American pilot, pale, unconscious, his head held above water by the collar of his aviation life jacket. From loss of blood, his wounded left leg had turned water about him to a vivid pink.

One of our group was swimming with a used metal ammunition canister which was water-tight. We draped our pilot over this canister, taking turns holding him until we reached the destroyer *Morris*.

The *Morris* had thrown cargo nets over the side of the ship, which gave each survivor about a fifteen-foot climb up the ropes of the cargo net.

Two *Morris* crewmen quickly came down the cargo net to help rescue our unconscious pilot.

At this point the radar of the *Morris* picked up approaching enemy planes. The ship sounded General Quarters, and prepared to go to full speed. Our pilot suddenly opened his eyes. Hearing our warning, "Watch his wounded leg," in a weak voice he said, "To hell with my wounded leg—just get my rear end aboard this ship!" Our pilot was rescued.

The rest of our swimming group quickly scrambled up the cargo net to the main deck as the *Morris* built up speed and manned guns to repel another enemy air attack.

On staggering to the bridge of the *Morris*, the captain, Lieutenant Commander Randolph "Randy" Boyer, threw his arms around me. We were Naval Academy classmates and friends of many years, but suffering from physical and mental exhaustion I did not recognize him.

As far as is known, no swimmers were lost in the water. Destroyers picked up all survivors. Before sunset one destroyer slowly circled the sinking *Hornet*, searching for any non-swimmers who were fearful of leaving the vicinity of the carrier.

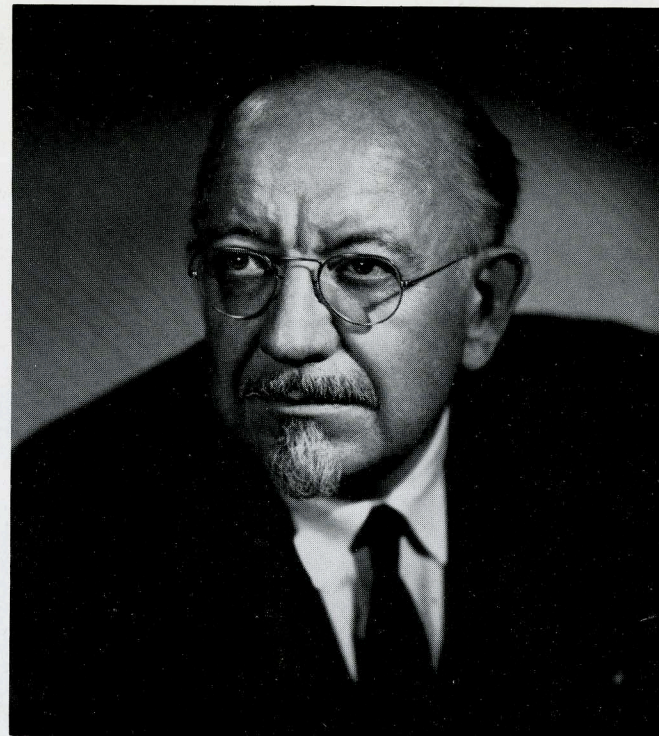
In less than a year a new *Hornet* joined the fleet. The action at Santa Cruz was the last in which a large United States carrier would be lost in World War II.

The writer is indebted to Alexander T. Griffin, Walter Lord, and Commander W. H. Cracknell, U.S.N., for many details of wartime life in U.S. Naval Aircraft Carriers, and to Captain Mitsuo Fuchida, Imperial Japanese Navy, for similar accounts of life aboard carriers of the Imperial Japanese Navy.

and part of which I was

Recollections of a Research Engineer

George H. Brown



OU EST MONSIEUR LA CARRIERE?

One beautiful day in May, my wife and I arrived in Paris to see some art, attend the opera, and of course to visit some dress shops. Only a month before, I had been elected Vice President of Engineering for the Radio Corporation of America so I had been given a list of people who merited a duty call in Rome, London, and Paris. Hence off we went one morning to call on Christian La Carriere who had performed some missions for RCA. In an office on Avenue des Champs Elysees, we were greeted by Monsieur La Carriere, a very lively and pleasant Frenchman who fortunately for us spoke perfect English. He introduced us

to Frank Bourgholtzer, a well-known NBC correspondent who wandered in to seek approval for an intimate garment which he had purchased for his wife.

Christian La Carriere then invited my wife and me to have dinner a few evenings hence at his home with his wife and daughter. He instructed us to come to his apartment near Place du Trocadero across the river from the Eiffel Tower. He added that Madame La Concierge would then show us to the elevator which would take us to the fourth floor where our host resided.

On the appointed evening, we arrived by taxi precisely at eight o'clock. We had no trouble in locating the brightly lighted conciergerie but found no sign of the concierge. After ringing the bell a few times with no response, I pointed out the nearby elevator and remarked that we need only go to the fourth floor without further delay.

Assistant Bridge Editor George H. Brown was formerly Executive Vice President—Research and Engineering—for the entire RCA Corporation. He is an Eminent Member of Eta Kappa Nu.

On leaving the elevator at the fourth floor, we found only two apartment doors, unmarked of course. I punched the bell on one. Immediately the door opened and a shawl-covered old lady literally screamed at us in unintelligible French. It was obvious that I had chosen the wrong door so I rang the bell on the remaining apartment. We were greeted by a pretty maid in a starched costume. I tried in my feeble French to explain that we were dinner guests. This time it was apparent that we were expected. The maid hung my wife's coat, conducted us down a long hall, and threw open large double doors. To our surprise, we saw a large elegant room occupied by a dozen or so men who immediately took turns kissing the hand of my wife, greeted me effusively in French, and offered us aperitifs. In an adjacent room, two maids were fussing around a large dining table set with sparkling crystal, snow-white napkins, and gleaming

silver. This was hardly in keeping with the nature of our invitation, but one never knows.

I was puzzled that Christian La Carriere was not there to greet us. I soon learned that nobody spoke English so I mustered my courage and asked, "Ou est Monsieur La Carriere?"

The reply was, "Il n'a pas arrive. Pas encore."

I had seen the Paris traffic so this was somewhat understandable. But as time passed, I tried again with, "Pardon, ou est Monsieur La Carriere?"

The astounding reply was, "Il arrivera apres le diner, peut-etre."

The *peut-etre*—perhaps—made me realize that we were in a most peculiar situation, so I said, "Attendez, je cherche la phrase dans ce livre."

And I hastily consulted my Collins French Phrase Book which allowed me to produce, "Je ne vous comprends pas. Je ne parle pas francais. Y'atil quel qu'un qui parle anglais?"

My feeble French protest finally produced a youth of perhaps sixteen years who spoke limited English. He conveyed to us that Monsieur La Carriere was unknown to these people and he conducted us to the concierge who explained that this was a huge apartment house with many elevators. She then showed us the way to the proper elevator and we were soon greeted by a very worried Christian La Carriere at nine o'clock.

We told our story which amused the La Carriere family enough to excuse our late arrival and then we enjoyed a fine dinner with excellent company.

At ten-thirty, Christian telephoned to the concierge to learn who our earlier hosts might be and then he telephoned them. He returned from the phone and hilariously related that these people had been expecting an important American couple who had been introduced by a letter. The denouement came with the information that our earlier hosts were still awaiting the arrival of their unknown guests.



JOIN AN ETA KAPPA NU TRADITION

Solid Brass Casting paper weight, 4 in. by 2.5 in. makes a lovely and practical memento of your induction into the Honor Society. Many Chapters require their pledges to polish the castings as part of their pledge duties. Prices: one casting, \$5.00. Two or more, \$4.00 each post-paid. Send order to: Eta Kappa Nu, Delta Nu Chapter, Attn. Dr. R. E. Lueg, E.E. Dept., P.O. Box 6169, University, Alabama, 35486.

GAMMA LAMBDA CHAPTER, Columbia University — The Gamma Lambda chapter of Eta Kappa Nu initiated a program of sponsoring weekly lunch meetings between students and faculty of the electrical engineering department as a means of allowing the students and professors to get to know each other and also for the students to learn more about the research the professors were conducting. These proved to be quite

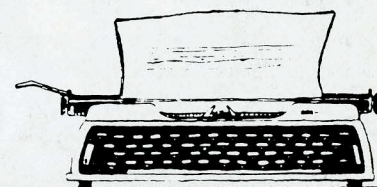
useful and interesting and we hope to continue this next year.

The highlight of the semester was the induction of new members and the election of officers. The following were elected as officers for the fall semester: Ronald Coopersmith, president; Sik Pu Kwan, vice president; Richard Arsan, recording secretary; Herbert Cunitz, treasurer; and Anthony T. Laudico, Bridge correspondent. The rest of the new members are Emmanuel Arguelles, Isidor Bendrihem, Peicheng Ju, Whan-Soo Kang, Todd Lar-chuk, Warren Roy Morrow, Ben Nathanson, Philippe Andre Perrier, Keith Porterfield, Mark Rumbaugh, Leon Douglas Sur-geon, Jose Vidal (from the senior class) and Gary Neil Cachules, C. Paul Douglas, Evan Lee Goldstein, Howard Kaye, Leslie Andrew Nelkin, Christine Perrier, Eugene Jay Rosenthal, David V. Rossi, Anthony Peter Russo, Brian K. Swain and Garrett Van Ryzin (from the junior class). After the ceremony, we were joined by Prof. Omar Wing (chairman of electrical engineering) for a dinner at Faculty House. A good time was had by all.

The officers of 1983-84 would like to wish the new officers and the chapter a successful and productive 1984-85. *by Thomas Mucci*

Mr. Donald Christiansen, Editor
Inst. of Electronic and Elect. Eng
345 East 47th Street
New York, N.Y. 10017

High Five



A visitor entered a western bar and found several men and a dog seated at a table playing cards. "Can that dog actually read cards?" asked the visitor. "Yes," replied the dealer, "But he is a terrible poker player. Every time he gets a good hand he wags his tail."

You know you are growing old when:

Your insurance company starts sending you six-month calendars twice a year.

The laundry will not take your clothes unless you pay in advance.

Your clinic number is printed in Roman numerals.

The grocery clerk suggests that you not buy green bananas.

Fun With Numbers

Select any three-digit number (285 for example). Repeat the digits in the same order to make a six-digit number (285285 in this case). Divide this number by 7. Divide the answer by 11. Divide that answer by 13. There will never be any remainders and the final answer will be the original number (285 in this case).

Any 20-year-old who isn't a liberal doesn't have a heart, and any 40-year-old who isn't a conservative doesn't have a brain.

Winston Churchill

Our Founding Fathers objected to taxation without representation. They should see it today *with* representation.

Most of us can keep a secret. It's the people we tell it to that can't.

When the lad graduated from college he was taken into the corporation by his dad. He started as assistant treasurer, then gradually worked his way through the ranks to third vice president, second vice president, executive vice president, president and—finally—dislodged the old man as chairman of the board. The old guy took it kind of hard and Sonny tried to console him. "After all," he said, "there's no difference between your success and mine. We both worked our way up through the ranks."

"There's one difference," said the dethroned chairman. "I didn't have a rich father."

The advantage age has over youth is that youth knows nothing about being old, whereas the old know all about being young.

"Who was that man I saw you kissing last night, daughter?"

"What time was it?"

"How could you have a son that age?"

I didn't. When I had him he was just a baby."

"My ancestors all followed the medical profession."

"Doctors?"

"No. Undertakers."

Father was always bothered by flat feet. They kept giving him tickets for speeding.

A gray-haired old lady, long a member of her community and church, shook hands with the minister after the service one Sunday morning. "That was a wonderful sermon," she told him, "just wonderful. Everything you said applies to someone I know."