



The AMA History Project Presents: Autobiography of GEORGE M. MYERS

Born May 27, 1928 Started Modeling in 1933
AMA #1370



Written & Submitted by GMM (08/2001); Transcribed & Edited by SS (02/2003), Reformatted by JS (10/2009), Updated (05/2011)

Career:

- As a youngster, researched for *Air Trails* magazine columnist Carroll Moon
- Started building wings for *F6F* airplanes for Grumman in 1943
- Worked on building the first 10 *Mallards* during the summer of 1946 after graduating from high school
- Received a Bachelor of Aeronautical Engineering degree from the Polytechnic Institute of Brooklyn and went to work as an engineer for Grumman
- Served as AMA District II Contest Coordinator, then Associate Vice President and, finally, Vice President
- Wrote a column on radio technique for *Model Aviation* magazine from its first issue until June 1998
- Served as AMA frequency committee chairman

Honors:

- 1985: AMA Distinguished Service Award
 - 1986: Vintage Radio Control Society Hall of Fame
 - 1986: Howard McEntee Award
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I was born in Riverhead, New York, and grew up in Mattituck, New York, where I built all the Megow, Scientific and Joe Ott stick and tissue models that I could find kits for. I was the only kid in the school who built flying models, as far as I know.

The Mattituck school system was very advanced, a fact that I came to appreciate much later. Somebody there presented me with a book for designing full-size aircraft. It wasn't of much use then for designing models.

World War II started and my father enrolled in a Grumman-financed program held in Sewanica High School in Mineola, New York, to learn how to build full-scale aircraft. (My father had left school in the fourth grade because his father had died, and my dad, as the oldest son, was expected to find work to support the family.)

Dad's studies led to a job at Grumman in Bethpage, New York, building J2F-1 Ducks, so he moved his family (including me) into a rented house in Wyamdanch, New York. I was so far ahead of my classmates in the Wyanch School that it was embarrassing. Again, I was the only kid in school who built and flew model airplanes. An adult, Carroll Moon, saw me flying and took me under his wing.

Carroll wrote a monthly column named "The Dope Can" for *Air Trails* magazine. My job at the time was to do research for him. The research consisted primarily of reading through the stacks

of magazines he received and marking articles that I found interesting. I developed a fondness for World War I Phineas Pinkham yarns written by Joe Archibald for Flying Aces magazine.

While living in Wyandanch I occasionally watched the “brown shirts” (Sturmabteilung, abbreviated as “SA”) goose-stepping up and down a grassy field nearby. They wore swastikas, gave each other the stiff armed Nazi salute, and yelled “Heil Hitler” all over the place. My father, who had served in the Allied front-line trenches in World War I called them sissies and traitors. Hitler called them his Fifth Column. (Editor’s Note: The SA was an organization first formed in Germany in 1920, which ended up under the control of Hitler. By World War II, the SA was considered a military training organization. More information about this time period and related organizations can be found in the archives and is available upon request. See the AMA Librarian for assistance.)

My father had worked himself up into a position as lead man on the new TBF-1 Avenger. Grumman held an open house for workers and their families. That was my first encounter with chocolate éclairs. Dad took us to the open house, then back out to Mattituck to visit friends. We had a very modern 1936 Ford four-door sedan, but there was no radio in it. I remember arriving home to hear President Roosevelt on the radio proclaiming that the day would “Live in infamy forever.”

Next, my father bought a house in Oceanside, New York, moved the family there, and started commuting each day to Port Washington, New York, where he worked building wings for F7F-1 airplanes. I joined AMA in 1943 while living at 99 Oceanside Parkway. My number, that year, was AMA 1930R, because you had to state whether you flew rubber-powered or gasoline-powered models at that time.

The next summer, in 1943, I started building wings for F6F airplanes at Port Washington. Grumman was desperate for mechanics then (World War II was going on). I suspect that I got the job because my father was doing the same kind of work in the same place and was driving there everyday.

World War II ended and my father died in 1945 while working in the Grumman plant in Bethpage, New York, on the Kaminski F8F Bearcat. The U.S. Navy, mindful of its losses at Okinawa, really wanted that plane.

The next year (1946), Tom Kelly (Mr. Lunar Module) and I were in the first group selected to receive Grumman scholarships. I graduated from Oceanside High School in June of 1946 and worked on building the first 10 Mallard’s that summer.

Houses were being built at a furious rate on what had been “our” Free Flight flying fields. U-Control models became popular, because they needed less space. I flew an original design U-Control speed model in the Daily Mirror meet, which was held on the Grumman airport in Bethpage, New York, that summer then left to enlist in the paratroops.

I served in Japan. When my enlistment ended, I came home to attend Hofstra College in Hempstead, New York, where I studied pre-engineering courses like electric fields and circuits, German (the Germans were way ahead of the United States in supersonic aerodynamics),

advanced mechanical drawing (the language we had to use to communicate with the shop), public speaking and report writing.

Then I moved on to the Polytechnic Institute of Brooklyn in Brooklyn, New York, for a Bachelor of Aeronautical Engineering degree. Upon graduation, I moved into the Change Group of the Grumman engineering department, so I could become thoroughly familiar with the Grumman way with drawings.

While living in Oceanside, New York, I made the acquaintance of a boy from Rockville Center, (the next town over) named Joe Archibold! Through him, I got to know **the** Joe Archibold and learned a bit about free-lance writing (the slow way to make a buck).

After I graduated from college, I took my degree to Grumman and started working as an engineer. I soon met Bob Aberle, who took me to his club, the Long Island Radio Control Society (LIRCS). With them, I learned to fly Radio Control (RC). While there, I met a member, John Byrne, who was the AMA District II vice president. John soon had me working as District II contest coordinator then as a District II associate vice president. Some time later John talked me into running for District II vice president.

At that time, Carl Wheeley handled all contest matters at AMA headquarters and wrote the contest schedule for the whole United States, which was carried in the back of American Aircraft Modeler magazine as a courtesy. John Worth decided that AMA should have its own magazine and started looking around for authors. Bob Aberle suggested me to write on "radio technique." So, my column by that name appeared in volume one, number one of *Model Aviation* magazine and continued until I had a stroke in June of 1998. Bob was serving as AMA frequency committee chair in 1995 and we spent many hours together testing RC systems for interference properties. We both reported what we learned, and thus was the narrow-band system we have today promoted. We must remember all the hard work done by Bill Hirschfield and Fred Marks in securing permission for narrow-band RC systems from the FCC. Later, I replaced Bob as frequency committee chair.

*(signed) George M. Myers
August 18, 2001*

The following was written by George in 1991. The opinions held are solely those of the writer, and not necessarily those of the AMA or its staff.

George Myer's View of the
History of Model Aviation and the AMA

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One Man's View of How AMA History
was Driven by Technology

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Mythologists trace the urge to fly back to Icarus and his wings of wax and feathers, a story told 20 centuries before Christ. Historians look back to the 15th century notebooks of Leonardo da Vinci. Engineers say that aviation, as we know it, was born in America in 1903.

By 1915, Igor Sikorsky had flown a four-engine transport airplane with sleeping berths, carpets and dining accommodations in Russia, his "Ilya Mourometz." It was used as a bomber in World War I. The largest plane in America then was a Curtis *Flying Boat* with a three-man crew. The Wrights and Curtis engaged in a lengthy battle over patents, which crippled aviation growth in the United States.

World War I (1914-1918) demonstrated the importance of aviation, which many Washington politicians, Generals, and Admirals also tried to ignore. By 1921, Col. Harold E. Hartney, commander of the U.S. Air Service's First Pursuit Group (which produced aces like Capt. Eddie Rickenbacker and Lieut. Frank Luke) resigned from the U.S. Army, to "give his whole enthusiasm to the building up of air consciousness on the part of the public." He reorganized the heavily debt-ridden Aero Club of America into the National Aviation Association (NAA).

General Billy Mitchell (who had been Col. Hartney's superior officer in WWI) sacrificed his career in an attempt to make the military recognize the importance of aviation. (The Japanese attack on Pearl Harbor in December 7, 1941 and the later attack on Alaska in June 7, 1942 followed the scenarios presented to the U.S. War Department by General Mitchell years earlier.)

Major Alexander P. de Seversky, who had been a leading ace of the Russian Air Force during WWI, also tried to interest the military in modern aircraft without success. His book, *Victory through Air Power*, was written to persuade the public to influence the military, and was made into a movie by Walt Disney. Education was the tool with which aviation's leaders hoped to arouse public, military, and political support for improvement of the air forces sufficient to protect America from the consequences of World War II, which the leaders of the world accepted as inevitable.

Model aviation was viewed as pre-school for the pilots that the nation needed for its survival. Spruce, bamboo, tissue paper, cellulose acetate glue, amyl acetate (banana oil) and cellulose nitrate/acetate nitrate dope (a lacquer-type finish) were the most important materials for models. Most of the models were free-flying scale and endurance types, powered by twisted rubber.

Several model airplane clubs were created for youth. The Junior Birdmen of America (JBA, 645,000 members) was supported by W.R. Hearst and his newspapers. The Air Youth of America (AYA) and the Airplane Model League of America (AMLA), with 400,000 members, were supported by the Bamberger (in New Jersey) and Jordan Marsh (in Boston) department stores. Companies to supply model airplane kits, such as Junior Aircraft Supply Company (JASCO) sprang up. The Junior Birdmen held their first national model airplane competition in 1928.

Small gasoline motors became available for model aviation about 1931. Gasoline motors converted model airplanes from kid's toys into adult toys. The Junior Birdmen opposed the use of gasoline motors in model airplanes as "too dangerous." Mr. Hearst asked the Department of Commerce to urge states to ban them. Two states did.

The name Academy of Model Aeronautics (AMA) was invented by Lieutenant Harold W. Alden, then Chairman of the NAA Committee on Model Aeronautics.

AMA was developed in the period 1934-1936 as a national organization "of, by and for" the model airplane builders of the nation, primarily by modelers who wanted to use gasoline engines. At that time, Radio Control (RC) systems were built by radio amateurs, so a close coordination with the American Radio Relay League (ARRL) began. AMA emphasized education and competition and promoted gasoline powered, radio controlled models.

AMA established categories for competition, published rules, kept records, and published its newsletters, to advance the science and performance of models and to educate our youth. AMA continued its association with the NAA, through which it maintained contact with the FAI and other organizations, to have direct contact with aviation and other bureaucracies, worldwide and at the highest levels. AMA was managed by adults, supported by NAA money, and directed at youth. Many enthusiasts supported a few individuals who tried to manage model aviation problems on a national scale.

AMA had barely started when most of its members were drafted to fight World War II (1941-1945). The pilots inspired by the JBA, AYA, AMLA, and AMA contributed significantly to winning that war. Then, as adults, they got busy making homes and families. Balsa wood, silk and dope became modelers' most important construction materials.

Gasoline engines in Free Flight models dominated. Fast, wire-tethered, gasoline-powered model airplanes, boats, and cars began to appear.

The post-World War II home building boom consumed flying sites. Jim Walker introduced U-Control, which became the dominant category of model aviation because it fit into smaller fields than Free Flight. Noise and safety problems arose. AMA espoused pull tests and noise abatement. AMA members received insurance, starting January 1956, which helped modelers obtain and hold flying sites.

Ray Arden's glow plug made powerful alcohol-fueled engines practical and automatic screw machines made them cheap. L. M. Cox and others sold glow engines by the millions. Glow plugs don't need high-voltage electricity to light them and alcohol doesn't explode like gasoline, so glow engines were accepted as safe enough for youth and became the dominant power source. Molded plastic aircraft became common at the entry level.

Cellulose acetate butyrate dope was adopted to resist nitrated alcohol fuels. Some adults brought U-Control to a high state of perfection, resulting in extremely powerful glow engines and models capable of 200 mph.

Rockets were invented in China in the 1300s and developed in America by Dr. Goddard in the 1920s. Again, America ignored a significant technology until Hitler began dropping V-2s on London. WWII had raised the power of explosives to the nuclear-bomb level. Military units, worldwide, concentrated on fitting nuclear bombs to intercontinental ballistic missiles.

The Sputnik era introduced the Space Race and reinforced the idea that we needed to train youth in rocketry. Harry Stine created the National Association for Rocketry (NAR). The youth loved it! For a while, AMA supported competitions with rocket-powered airplanes. NAR grew rapidly.

George Washington initiated NAR's decline when he urged celebration of the 4th of July with fireworks. Subsequently, cheap fireworks in the hands of children provided an ever-increasing toll of injuries and property damage, which was tolerated for a while. Then a college student, reading from open literature, designed a personal atomic bomb. That got everyone's attention! Laws prohibiting personal fireworks proliferated. (Americans hadn't learned anything from the alcohol prohibition fiasco.)

NAR emphasized safe operation of model rockets, but that fact made no difference to the legislators. NAR shrank, a direct result of the anti-fireworks laws. Motors for model rockets can still be sold, due to exemptions from the fireworks laws obtained by NAR. But there is little activity in the hobby. Perhaps the Challenger disaster would have been avoided if more youth had been involved in model rocketry. The NAR saga illustrates the danger of abandoning science to "have fun" or blindly promote safety. A world where nothing happens will be perfectly safe for people who do nothing. Life is unsafe and science is the only way we have to control the danger. Consider AIDS, cancer, hailstones, tornados, earthquakes, and the common cold as things that science may someday control for us.

With Dr. Shockley's invention of the transistor in 1948, cheap RC systems for models became practical and RC grew to dominate the hobby. Radio Control satisfied more people than U-Control, which languished. AMA's main concern became how to get, and keep, portions of the radio spectrum for model aviation. John Worth, a pioneer modeler, moved from AMA President (1964) to Executive Director of AMA (1965-1986).

Many modelers resisted learning Morse Code and radio theory, which was required to obtain an amateur radio license. John worked long and hard with AMA's volunteer Frequency Committee (mostly ARRL members like Dr. Walter Good and Ed Lorenz) to persuade the FCC to give us public (non-Amateur radio) channels for RC. They obtained one licensed channel on 27 MHz, then six, then eight. Citizens band (CB) "communicators" drove us off the 27 MHz band with their illegal, high-powered transmitters. A few more volunteers worked equally hard to get licensed channels on the 72 MHz Personal Radio Service (PRS) band. After a while, the FCC admitted that CB was out of control, so licensing was abandoned for both CB and PRS.

We soon found that giving model aviation an unlicensed "secondary user" status on 72 MHz, then limiting us to $\frac{3}{4}$ -watt into a hand-held $\frac{1}{4}$ -wave antenna, was futile while the licensed primary users were allowed 300 watts into a mast-mounted high-gain antenna on the same channels. More volunteer effort, led by Bob Aberle as Frequency Committee Chairman, produced today's unlicensed 50 narrow-band channels, exclusively for models. The "exclusivity"

was challenged immediately. AMA fought back against the challengers and has won all the battles but one. More battles are expected.

Peculiarities of the balsa tree lifecycle, worldwide deforestation and the development of super-tankers combined to push the price of balsa wood very high. Supertankers used balsa for insulation, to keep oil from congealing while it was being transported. Oil is used to create plastics. The plastics are used to create "Almost Ready to Fly" (ARF) airplanes, which are now cheaper than balsa wood kits and quicker to build. ARF airplanes created a "sport" of RC flying, in which the emphasis is on performance, rather than on science and craftsmanship. The sport has attracted many men in the 30 to 40-age bracket into AMA, because AMA offers very cheap insurance.

Some people have carried the science of aviation to extremes. Consider Burt Rutan's gasoline-powered, crew-of-two, non-stop round-the-world *Voyager*, Bob Boucher's 24-hour solar cell-powered electric flight of the *Sunrise I* in 1974 and Dr. Macready's international London-to-Paris flight of the electric-powered *Solar Challenger* for examples. A whole movement grew up around hang gliders and ultra-light aircraft, from designs started by Chanute, Lilienthal, Montgomery, and others, before the Wright brothers.

Glow engines now develop enough power to drive ducted-fans that simulate jet engines, without the noise, stench, and fire hazard of kerosene turbines. They permit 200 mph RC models of fighter aircraft. Lightweight gasoline engines, developed for chain saws and leaf blowers, power large RC model airplanes weighing 100 pounds and more. Miniature TV systems and data telemetry fitted inside RC models creates the cockpit experience while the RPA (remotely piloted aircraft) pilot's feet remain on the ground. An RPA sport has been created. RPAs are said to be too expensive, complex, and dangerous for our youth. Materials of construction now are molded plastic parts, vacuformed plastic sheet, plastic foams, fiberglass, hardwoods, shrink-wrap plastic covering materials, epoxies, and Cyanoacrylate adhesives. "Where are the Juniors?" is the cry. Where indeed?

Computers are merely tools to do what the human brain already does (but without the problems of fatigue or boredom). They are as old as mankind. Perfection of Large Scale Integration (LSI) of complete electronic circuits on single silicon chips and Surface Mount Technology (SMT) have led to rapid improvements in computers and in **computer games**. Our youth adopted computer games as their preferred hobby. They have quarters to play with and nobody can get hurt.

Rapid improvement of computers and robots promoted manufacture of smaller, lighter, stronger, cheaper, and more reliable RC systems. Rate gyros and in-transmitter mixing of control signals made model helicopters and other complex aircraft practical. Cobalt magnet electric motors and better batteries made electric-powered aircraft practical.

Electric motors are quieter and significantly less dangerous than internal combustion motors. In some areas, our youth have taken up electric RC flying, after they have outgrown their interest in electric-powered RC cars and boats. The low power/weight ratio of available electric power systems encourages an interest in science and craftsmanship to obtain performance. Some youth

are entering the hobby of model aviation, electrically, because it is a challenge that they can accept and master. We should encourage them.

The Future

Aviation is the best way we have to move people and other perishables over long distances. If we don't run out of fossil fuels, aviation won't need further development. If we **do** run out of fossil fuels, or if we get a little closer to killing off all life on earth through our pollution of the environment, then we can expect a great need for changes in all transportation (Beam Me Up, Scottie!) In order to have people interested in and able to make such changes, we have to train them.

Aviation (in the sense of a transportation system) has been developed about as much as necessary for this earth. I've read that the SST has yet to make a profit. The AeroSpace plane (Washington to Tokyo in 2 hours) probably won't make a profit, either. Existing airplanes have become slower point to point and make less profit, due to price gouging by oil companies, security measures necessitated by insane terrorists, ground transportation defects in and around airports and by populations concentrating around airports.

AMA must survive, to continue to protect the environment in which modelers flourish, because modelers are important to survival of our nation. In Korea, for example, aviation is taught as a **required subject** in their middle schools. Not so in the U.S.A., where education is controlled by people with other priorities. Only AMA is left to fill that educational gap. AMA must educate the educators.

As I see it, airplanes have lost their hold on our youth, because the youth can no longer see them and touch them. Airports are places with fences, guard dogs, intrusion alarms, and armed police, to keep people away from airplanes. "Real airplanes" don't have propellers on the nose, they have jets. Real airplanes fly too high to be seen. On the other hand, there is ample reason for our youth to be attracted to RC cars and boats because they can ride in and touch them any day.

The United Nations fought Desert Storm using a mix of professionals and volunteers plus superior organization. They won the battle, using aircraft and RPAs in a way that has never been seen before. How many of those pilots had some experience with models?

Model airplanes are noisy, smelly, dirty, dangerous things that must be banned to places where women with small children don't go --- at least, that is the popular image. If you know anything about science, you know that it is always noisy, smelly, dirty, and dangerous. That's what makes it exciting. The same applies to sports. It should be obvious why we have very few children involved in model aviation.

Two other things are obvious about both science and sports:

- (1) Success comes to the best organized and prepared.
- (2) They have outgrown private barns and vacant lots.

Model aviators, as a class of people, must become better organized to survive. AMA must learn how to organize effectively and must teach organization to our members. AMA must learn to

make better use of the talents in our chartered clubs. The need has always existed, but seldom satisfied.

Flying sites are disappearing. Lose the flying sites and you lose the hobby. AMA must take an active part in flying site acquisition and protection. My crystal ball says that model aviation must generate large, well-developed, and intensively used flying sites. That means sharing the facilities with many people. Land is too valuable to leave it vacant; just so a few people can fly model airplanes over it for a couple of hours per year. Look at all the shopping centers that used to be airports. Consider how many formerly public beaches now have hotels squatting on them. Look at all the campgrounds that the Boy Scouts "used to own." Guess what will happen to our present flying sites if AMA fails to take vigorous action to protect them.

The people who grew up with aviation and with the AMA have aged, without bringing in enough younger folks to replace them. AMA membership stands at 180,000, nationwide. Modelers (as represented by the national organization) have shrunk from 0.8% to 0.08% of the population. We are 10% of what we used to be!

The "old folks," perhaps seeking a less demanding environment for their "golden years," concentrate on nostalgia, giant scale and "fun flies," rather than on science and improvement through competition. The focus on "fun" is killing AMA. The Sport Aviation organization, which is trying to get started at AMA's expense, is a perfect example of what is wrong with model aviation, today. AMA must challenge vigorous young adults or it will certainly die. At the same time, AMA should be developing a multi-tier organization, designed to accommodate both the laid-back old folks and the aggressive young folks.

A museum is essential recognize past leadership, highlight innovation and provide understanding of the past; but where is the laboratory for developing the future? AMA has become too conservative. The first reaction to new ideas usually is to ban them instead of invest in them. For instance, AMA should have got FCC permission for telemetry by now. A good low-speed wind tunnel could still do wonders for model aviation. The Muncie facility could be set up as a development center for model aviation, analogous to the nearby Wright-Patterson Air Force Base, perhaps in cooperation with it or with some college of aeronautics. None those ideas ever have been considered in print.

When you talk to modelers, most of them say, "I joined AMA for the insurance." Of course they did. AMA insurance is too cheap! Where else do you get such coverage for \$59 per year? I think AMA should get out of the insurance business, if possible, and concentrate on its chartered business of promoting model aviation science. If AMA sells insurance to build membership, then the insurance should be priced according to its cost.

The insurance that protects our flying sites also threatens to bankrupt AMA through abuse of the tort system of law. AMA has to help change the law. That system must be brought under more reasonable control.

AMA must involve all modelers in that fight. AMA members must get their noses out of their airplanes and into the real political world, sometimes.

The AMA magazine, *Model Aviation*, should be using the most advanced media possible. It should attract the most talented, best-educated scientists and writers possible, and give them a platform from which to address the public. There should be less emphasis on "Who did what for fun," and more on "Who did what for aviation." AMA must focus on the needs of aviation in the 21st century, for that is its only future.

About the Author

George M. Myers, AMA 1370

1928: Born on Long Island, NY, "the Cradle of Aviation."

1934: Built his first rubber-powered model airplane (Boeing *B-9*).

1941: AMA member #1931R.

1943-1946: Grumman employee building *F6F*, *F8F*, *Mallard* (summers).

1944: First airplane ride (Piper *Cub*).

1946: Won Grumman scholarship.

1946-1949: U.S. Army paratrooper (Japan).

1949-1953: Polytechnic Institute of Brooklyn (B. Aeronautical Engineering 1953)

1951: Built his first RC model and radio.

1953-1986: Grumman engineer (*F9F Panther* through the *Space Shuttle*).

1969-1970: AMA Contest Coordinator, District II.

1975: AMA Contributing Editor, *Model Aviation* magazine.

1982-1990: AMA Frequency Coordinator, District II.

1984: AMA Contest Director

1987-1988: AMA Frequency Committee Chairman 1990- AMA Associate Vice President, District II.

Father of four, Grandfather of eight, widower, and retired.

Suggested Readings:

1. *Up and At 'Em*, by Col. Harold E. Hartney, 1940, reprinted by Doubleday & Co., NY, 1971, Library of Congress #75-138931, see pg 299 et. seq.

2. *Victory through Air Power*, by Major Alexander P. de Seversky, Simon & Schuster, NY, 1942

3. *The History of the Academy of Model Aeronautics, Including Part One and Part Two, From the Beginning to the Year 1966*, by Willis C. Brown and Dick Black. There is no publisher's data or ISBN number. This was privately printed for the benefit of AMA. I read a copy from the National Model Aviation Museum's Lee Renaud Memorial Library.

4. AMA's 50th Anniversary, *Model Aviation* magazine, June 1986, pp. 95-102

5. *Kitty Hawk to Sputnik to Polaris*, by Cmdr. Eugene. E. Wilson, Literary Investors Guild, Palm Beach, FL, 1960, Library of Congress #60-10795

6. All copies of *American Aircraft Modeler*, *Air Trails*, *Flying Aces*, or *Model Airplane News* magazines that you can find.

7. *Leadership Secrets of Attila the Hun*, by Dr. Wess Roberts, NY, 1985, ISBN 0-446-51516-7

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