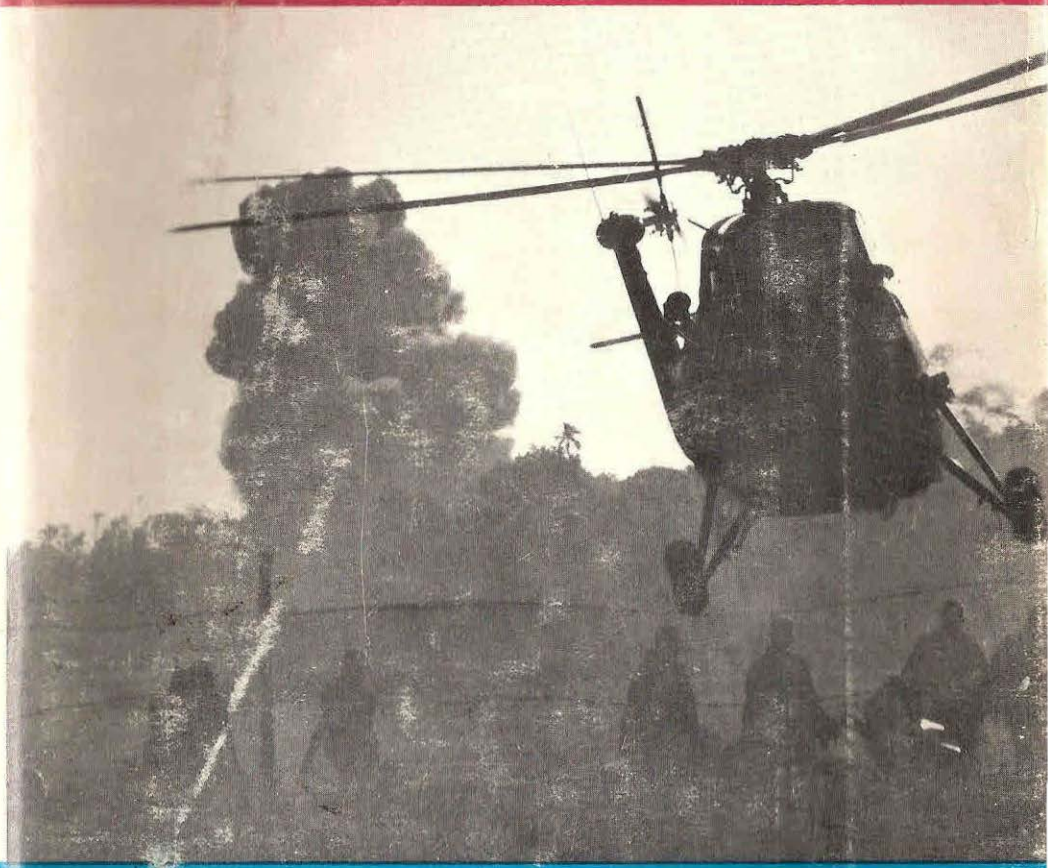
THAT OTHERS MAY LIVE

The Aerospace Rescue and Recovery Service



by L. B. TAYLOR, JR.

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4 □ A PROUD HISTORY

The history of rescue is as old as the brotherhood of man.

No matter what era, area, or circumstance is involved, rescue has always been one of the great human interest stories. Be it a man trapped in a cave, a survivor drifting aimlessly on a life raft in the ocean, or a lone pilot lost and injured in the enemy-thick jungles of Vietnam, there is no saga quite as inspiring, as exhilarating or as dramatic as that of man risking serious injury or death itself to help his fellow man in trouble. Rescue is a compelling, all-encompassing human instinct. In crises people pull together as never before, often performing deeds far beyond their normal capacities when a life is in the balance. So it has always been and will always be. Such is the nature of man.

The first known aerial rescue occurred in 1870, thirty-three years *before* the Wright Brothers flew their plane at Kitty Hawk, North Carolina. It happened in Paris during the Franco-Prussian War. To escape the bombardment of Bismarck's guns, the French used observation balloons to evacuate by airlift 160 wounded soldiers who otherwise would have died or been captured by on-charging troops. The same principle of moving injured men is being used by ARRS throughout Southeast Asia, although the tactics have been refined and the means of transportation revolutionized.

Almost before the Wright Brothers landed, following their historic, twelve-second flight, farsighted men were considering the rescue potentials of the airplane. U.S. Army personnel, as early as 1909, visualized the swift movement of their wounded from battlefield to hospital. But, again, it was the imaginative French who first put the theories into practice.

In 1915, during World War I, the French Air Service successfully evacuated patients from Serbia by air, although, in those perilous, early days of flight there was nearly as much chance of being injured en route as there was on the battlefront. Three years later Americans were stripping rear cockpit seats out of single-engine Jennys and modifying them to serve as "flying ambulances"; but before the concept of military aerial rescues could be proven, the war ended.

Little happened over the next quarter century to

change things, although in 1926 the French once more improvised ambulance planes to fly wounded soldiers over the Atlas Mountains during the Riffian War in Morocco. The British also were experimenting with converted transports, but in America plans to use aircraft for rescue work received a serious setback when a test plane crashed, killing seven people. The unfavorable publicity that resulted was somewhat offset in 1928, when stranded storm victims were airlifted from Rock Springs to San Antonio, Texas.

The Germans were quick to capitalize on the brightening possibilities of aircraft rescue work. During the Spanish Civil War in 1936 they flew casualties home across the treacherous Alps. And at the outbreak of World War II, in 1939, they ferried thousands of wounded men to hospitals from the bloody fronts in Poland and, later, in Russia.

When the German bombings of England began, thoughtful generals realized crippled planes might fall short of the French coast while returning from runs over London, so they set up a welcoming party of rescue aircraft and boat launches. Heinkel-59 float planes carried collapsible rubber rafts, blankets, medical stores, and two-way radio communication gear; and from the air, pilots directed the swift motor launches to downed flyers in the English Channel.

So heavy were the cross-Channel bombing missions, and so many planes were being shot down, that the

Germans went a step further by introducing the sea rescue float. These large, buoy-type floats were spaced at strategic intervals across the Channel and were fitted with bunks, blankets, clothing, food, water, distress signals, and lamps—almost all the comforts of home. All a downed airman had to do to save himself was reach one.

In the early days of World War II, Allied flyers learned a lot about rescue techniques and equipment from the Germans. For instance, every Luftwaffe plane, fighter or bomber carried inflatable dinghies and dye markers, and most crews also had portable radio transmitters.

In Vietnam when a pilot is shot down, his chances of being rescued—within minutes—are very good. In 1940 when a Royal Air Force flyer had to ditch his plane, he had the proverbial two chances of survival: slim, and none at all. In one three-week period that year, 220 airmen were killed or reported missing. The situation was desperate. Never before had the need for an organized rescue operation been so tragically emphasized.

The British therefore set up a local recovery service off the coast of Dover, using borrowed Lysander amphibian planes, light naval craft, and high-speed launches. The chances of a downed pilot living to fly again began increasing almost immediately.

But the growing pains started all over when the

United States entered the war late in 1941. More planes filled the skies and more pilots were hit and grounded. Worst of all, the Americans had no planned organization to help their flyers in distress. Survival equipment was meager, and the men themselves knew little about actual operations. It was soon agreed, however, that since the RAF had already set up a rescue operation, the United States, instead of beginning one of their own, should join hands with the British.

As the war dragged on, Allies set up extensive training sessions for their aerial crews, teaching them first how to ditch a plane, then how to get out and make proper use of survival equipment. The practice paid quick dividends. In 1943 only 28 per cent of Eighth U.S. Air Force men who went down were saved. In less than a year the figure rose to more than 40 per cent, and by September 1944, nine out of ten airmen forced down in the North Sea, the English Channel, and other waters around Great Britain were successfully recovered.

Similarly, rescue service in the Mediterranean Sea also improved immensely during the latter part of the war. The first American unit assigned specifically to pick up downed pilots in this area was activated in North Africa in 1943. On July 17 of that year they carried out their initial mission—by finding and rescuing a British airman who had been adrift in the Mediterranean for eight days!

A month later one of the most dramatic recoveries

of the war was made, following the ditching of three disabled B-17 bombers. A twin engine OA-10 amphibian—the famous Catalina—rushed to the area and sighted ten survivors in a life raft. The seas were too rough for landing, but the "Cat" pilot went down anyway, and tore off the plane's right wing float when he smacked the water. The ten men were picked up, but a takeoff was now impossible, so the OA-10 turned toward home and began taxiing, bucking huge waves. From above, a British Spitfire radioed sighting ten more survivors and directed the Cat to them. Waterlogged, weather-beaten, and overloaded with twenty passengers, the plane struggled desperately in the rough seas and was in danger of sinking. By four in the afternoon, though, seven hours after the initial landing, a motor launch arrived and towed the sick aircraft and its precious cargo to shore. The next day three more B-17 survivors were recovered.

In the Pacific, aerial rescue operations suffered the same organizational troubles as in the Atlantic, only compounded, because there were such vast stretches of ocean to span between the islands. In the English Channel or in the Mediterranean a downed pilot was always within a hundred miles or so of Allied territory. In the Pacific he might be many hundreds of miles from *any* point of land, Allied or enemy!

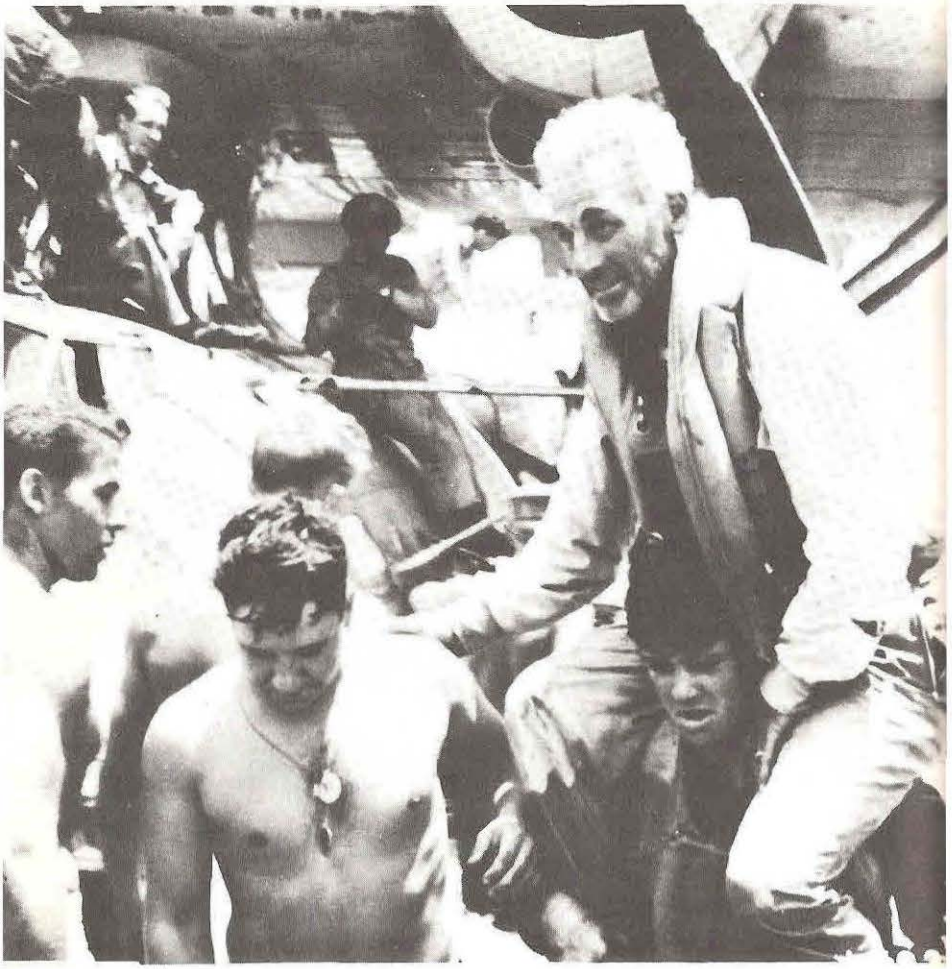
Also, in Europe the British had helped in setting up rescue bases and operating them. Americans were on

their own in the Pacific. And whereas the bases in Europe were pretty well fixed for the duration of the war, the ones on the other side of the world had to be mobile. They had to be advanced with each island-hopping step United States forces took in their long, embattled march toward Japan.

From the first, rescue was a disjointed, sometimes hazardous, and often a frustrating and fruitless business in the Pacific. There was no single service assigned for recovery of downed airmen. Each individual unit was responsible for its own people, and when a flyer ditched or bailed out in that enormous ocean, he knew there would be little chance of anyone finding him, especially early in the war. The air was infested with Japanese planes, and searchers frequently ran into high winds, rain squalls, and heavy overcast—all of which cut down visibility. And when one was looking for a man in a life raft in the Pacific Ocean, it was a nearly impossible mission even under ideal conditions.

Still, lives were at stake and supreme efforts were made—thanks largely to the dedicated work of such men as Major John H. Small, Jr. Realizing the need for rescue service and the problems that must be surmounted, Major Small began by drawing up a jungle survival book and distributing it to U.S. air crews, so if they ditched near an island they would at least know how to live off the land. Through persistence and diligence he organized a small recovery unit, based out of

When General Nathan Twining's airplane went down at sea during the early part of World War II, a number of men, ships, and planes were diverted from their operational missions for five days—until life rafts were sighted. This helped point out the growing need for a separate rescue service. (*U.S. Air Force*)



Brigadier General Nathan F. Twining comes ashore from a Navy PBY flying boat which rescued him after his B-17 plane had been forced down in the Coral Sea. General Twining had been given up for lost until crew members aboard a "Flying Fortress" piloted by Lieutenant William H. Bailey sighted his life raft. (*U.S. Air Force*)

New Guinea. With only four Catalinas, his men saved 455 downed airmen by the end of April 1944.

His work, and the spectacular, highly-publicized, at-sea pickup of General Nathan Twining, did much to point out the importance and never-ending need for rescue operations. On January 27, 1943, Twining, then commander of the 13th Air Force, went down in a B-17, along with fourteen others, in the Coral Sea. For five and a half days they drifted in life rafts while a full-scale operation—using Air Corps, Navy, and Marine planes and Navy vessels—searched for them. On the sixth day, crew members aboard a Navy PBY sighted them off the New Hebrides Islands, landed in the water, and made the save.

All planes and ships deployed in the search had been pulled from operational fighting forces, and the mission emphatically underscored the necessity for an independent rescue service. As a direct result of the Twining episode, an emergency school was formed in the spring of 1944 at Keesler Field, Mississippi. By July, the 2nd Emergency Rescue Squadron had completed its training and was assigned to the Fifth Air Force in the Pacific. Within six months, the fledgling crews saved three hundred airmen from death or capture—an average of 1.6 saves per day.

A recovery equally as famous as Twining's occurred August 1943 in another part of the Far East.

Although there were high-ranking United States officials, Chinese generals, and famed news correspondent Eric Sevareid among the survivors, it was not *who* was picked up so much as *how* they were saved that became important. For out of this mission came an entirely new concept that is today employed worldwide by ARRS—pararescue.

Sevareid and the officials and generals were flying near the China-Burma border in a C-46 when the plane developed trouble and crashed. Wing surgeon Don Flickinger, a lieutenant colonel, and two of his medical corpsmen volunteered to go after the victims, although they knew they would have to parachute into extremely rough, hilly terrain, and none of the three had any jump experience to speak of. Nevertheless, when they reached the crash site, they saw a crude message scrawled on the ground: NEED URGENT MEDICAL CARE. Without hesitation Flickinger and Sergeants William G. MacKenzie and Richard S. Passey bailed out at eight hundred feet and landed near the huddled group of survivors, who were then treated for broken ankles, legs, and other injuries, and eventually were led to safety.

The technique of pararescue was graphically demonstrated as both practical and expedient. Newspaper accounts of Flickinger's mission had much effect in convincing officials who had previously questioned and doubted this method of rescue operations. Today, with

a full pararescue capability, there is literally no place, no matter how inaccessible, that cannot be reached by ARRS crews. If planes or helicopters can't land, PJs can jump or can ride their hoist down to reach anyone, anywhere.

Still another dramatic rescue of World War II occurred in November 1942 at a site thousands of miles from the nearest battle front—the Greenland Ice Cap in the arctic. Here, American airmen were stationed at a key link in a chain of air bases which served as aircraft ferrying and communications and weather stations. Hundreds of U.S. planes, destined for Europe to participate in the Allied invasions, used Greenland as a way station en route.

In any arctic region, where raging blizzards howl during endless nights, it is inevitable that a certain number of planes go down. When a C-54 transport was lost somewhere on the east coast of the large island, 120 aircraft were sent out to search for it. One of them, a B-17 with nine men aboard, took off at dawn on November 9, 1942, and never came back. Thus began one of the great epics of rescue—an all-out effort that lasted months and cost the lives of four men.

Colonel Bernt Balchen, commander of the arctic's Task Force 8, personally directed the intensive search for the missing "Fortress." For two weeks, bucking fierce winds up to 175 miles an hour and violent snow-

storms, the rescuers found nothing. Then, on November 24, Balchen sighted some red flares and found the wrecked B-17. It was lying in a valley of a crumbling glacier, crisscrossed with crevasses and bottomless canyons in the ice. The plane's tail end hung precariously over such an abyss. Landing was impossible in the teeth of a roaring storm, so Balchen dropped food and survival equipment to the B-17's crew, who had somehow, miraculously, lived through the crash.

Four days later, when the winds died, the colonel flew over the downed men again and dropped medical supplies. A Coast Guard amphibian plane landed and picked up two of them, but on their way out the plane smashed into the side of a mountain during a blinding blizzard, and all three occupants died. Adding to the tragedy, a land motor sledge, one of two directed to the B-17 site, plunged through a snow bridge only one hundred yards from its destination, and its operator was killed in the fall.

Eventually seven crew members were saved. Balchen landed in a PBY and picked up the three remaining survivors himself, but the plane couldn't take off with the extra weight, so he struck out with the men by dog sled, and made it to the coast in two weeks, despite 150-mile-an-hour headwinds. They were finally recovered by more PBYs and flown to safety, ending an unparalleled story of suffering, sacrifice, and human endurance.

At the war's end in August 1945, there were several rescue units stationed in both the European and Pacific theaters. Their outstanding achievements are lasting tributes to such pioneers as Major Small and General of the Air Force "Hap" Arnold, who had long recognized the need for a separate rescue service and gave it his 100 per cent backing.

In addition to the thousands of men downed, desperate, and virtually without hope who were saved during World War II, rescue crews made other significant, often intangible contributions to the overall effort. Improvement of morale was one of the most important.

Pilots' spirits were lifted, first of all, by knowing somebody cared about their welfare and, secondly, that the somebody could do something about it; that they would be in there to pull them out if humanly possible. It was a reassuring feeling that had immeasurable impact upon the flyers, and it gave the entire Air Corps a booster shot of confidence. When rescue people continually proved not only their stick-to-ittiveness but also their unflinching courage on dangerous missions, they quickly won the respect of their fellow servicemen—and of the enemy as well.

Another significant contribution, though dearly paid for through a costly trial-and-error developmental period, were the actual rescue techniques employed under a variety of situations. Many of these formed

the basic standard procedures for the Aerospace Rescue and Recovery Service today. Certainly the concepts and potentials of aerial rescue operations in wartime were proven for all time during World War II.

And, tied in with this, the successes of the early rescue units during the late years of the war vividly pointed out the overall necessity of having an adequately equipped, fully trained, combat-ready rescue service as a regular, integral part of the U.S. Air Force.

In the immediate months following the end of the fighting there was considerable difference of opinion and much official paper shuffling regarding rescue. The basic needs of such a service were no longer questioned. The problem: Who was to do what? The U.S. Coast Guard, since 1915, had borne the primary responsibility for air-sea recoveries off the coast of the United States. But, the Army Air Force pointed out, such a service was now needed worldwide—from the Greenland Ice Cap to the jungles of Burma.

Finally it was decided the Air Transport Service would be responsible for providing an aircraft search and rescue operation for all components of the U.S. Army. ATS would establish and maintain a land-air search and rescue organization within the United States and at overseas bases. Global coverage was visualized, with squadrons assigned to the various Air Force commands throughout the world. The Coast Guard would be obligated to sea rescue along trans-

oceanic air routes and in waters near the United States and its possessions.

On March 13, 1946, Headquarters Air Rescue Service was set up at Andrews Field, Maryland, and two and a half months later, on May 29, Colonel Wallace S. Ford became the first commander of the new unit. ARRS was born.

Problems involved in the initial task of building a global rescue operation were monumental. With the war over, most pilots and crewmen experienced in recovery work left the military. Colonel Ford had to begin his building program with a base force of 1,100 men, a shoestring budget, and a fleet of 116 aircraft—all obsolete.

Supply and equipment requirements had to be filled, personnel secured and assigned, training programs set up, bases established, and a hundred other things straightened out—to develop a service capable of effective rescue coverage around the world. But Colonel Ford and his men waded in. By July they had a command framework of two squadrons and ten detachments, and within six months ARS units conducted searches for sixty-four military and forty-three civilian aircraft, participated in searches for survivors of sea disasters, and performed other civilian missions of mercy.

In December 1946 Colonel Richard T. Kight assumed command of the Service, and never before in

his distinguished thirteen-year career had he faced such a challenge. But he found his men, despite their lack of training, experience, and the proper equipment, more than ready to meet it. Morale was and has always been a plus factor with rescue people. With an indomitable spirit and a dedicated cause, ARRS began to grow. With each successful mission over the years—each saved life—the Service's stature increased, more reliance was placed on it, and thus more appropriations and manpower were forthcoming. The Service had earned its stripes.

From its shaky beginning in 1946, ARRS has developed into a dynamic organization, staffed by 4,300 professional men at eighty-seven bases in twenty countries around the world. It is one of three global services of the Military Airlift Command (MAC). While its missions now range from participation in Vietnam action to support of the manned space program, its humanitarian activities vary from midocean searches to the rescue of stranded mountain climbers.

By January 1966 ARRS had rescued over 12,000 people from certain death and aided another 56,000 persons—a record involving more than 103,000 missions and 600,000 flying hours. To accomplish their job, rescuemen fly under the most adverse weather conditions and over the most inhospitable terrain on the face of the earth. Theirs is a mission inherently

dangerous, and it is one which never lets up—twenty-four hours a day, seven days a week, 365 days a year. Disaster seldom chooses fair weather or convenient hours. Somewhere in the world every day of the year ARRS is called on for help, and every call is heeded.

From the ill-equipped, obsolete fleet of planes the Service inherited in 1946, it is today staffed with a variety of aircraft designed and modified specifically for the rescue mission. Included in the inventory are the workhorses of Southeast Asia, already discussed, such as the HH-43F Huskie and the CH-3C Jolly Green Giant helicopters, the reliable HU-16 Albatross amphibian, and the HC-130H Hercules.

Facilities for search and rescue operations are strategically located to meet any civil or military air rescue need. All such operations are directed from ARRS Headquarters—which will move soon from Orlando AFB, Florida, to Scott AFB, Illinois—through any of five centers.

Continental search, rescue, and recovery activities are coordinated through one of three centers:

Eastern ARRC—Robins AFB, Georgia.
Central ARRC—Richard-Gebaur AFB, Missouri.
Western ARRC—Hamilton AFB, California.

Overseas operations are coordinated by:

Atlantic ARRC—Ramstein AB, Germany.
Pacific ARRC—Hickam AFB, Hawaii.

These five centers supervise seventy detachments.

Fourteen squadrons are under the command and control of ARRS Headquarters. They are:

31st ARRSq—Clark AB, Philippine Islands.
33rd ARRSq—Naha AB, Okinawa.
36th ARRSq—Tachikawa AB, Japan.
37th ARRSq—Da Nang AB, Vietnam.
38th ARRSq—Tan Son Nhut AB, Vietnam.
41st ARRSq—Hamilton AFB, California.
48th ARRSq—Eglin AFB, Florida.
54th ARRSq—Goose AB, Labrador.
55th ARRSq—Kindley AFB, Bermuda.
57th ARRSq—Lajes Field, Azores.
58th ARRSq—Wheelus AB, Libya.
67th ARRSq—Moron AFB, Spain.
76th ARRSq—Hickam AFB, Hawaii.
79th ARRSq—Andersen AFB, Guam.

In addition to the total authorized strength of 1,060 officers and more than 3,000 airmen, five Air Force Reserve squadrons back up ARRS. They include:

301st ARRSq—Homestead AFB, Florida.
302nd ARRSq—Luke AFB, Arizona.
303rd ARRSq—March AFB, California.
304th ARRSq—Portland, Oregon.
305th ARRSq—Selfridge AFB, Michigan.

Reserve personnel include pilots, navigators, airborne radio and radar operators, maintenance specialists, flight mechanics, loadmasters, and pararescuemen. These units are fully trained in the operation of HU-16s and HC-97Gs, and are on standby—ready for action, if needed.

They have been called upon to support search and rescue missions from Alaska to the Dominican Republic during the crisis there in 1965. They have also backed up regular ARRS forces during manned space flights, when recovery crews are positioned around the world, and reservists have carried out rescue missions of their own when time and circumstance prescribed it. Such was the case recently when an HU-16 out of the 301st Squadron in Homestead, Florida, landed in Bahamian waters to pick up survivors of a DC-3 civilian airliner that had been forced to ditch in the Atlantic.

Thus, at points around the earth, regular and reserve ARRS units link arms to form a truly global rescue capability. Thousands of men and over two hundred helicopters and aircraft are on constant alert.