

WINGS OVER ASIA

A BRIEF HISTORY
OF
CHINA NATIONAL AVIATION CORPORATION



WINGS OVER ASIA

Volume 1

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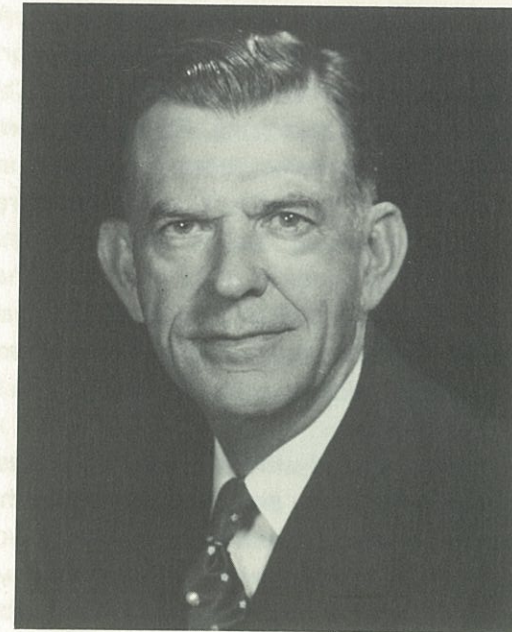
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Generalissimo and Madame Chiang Kai-shek.

This history would not have been possible without the steadfast vision and unwavering support of Generalissimo and Madame Chiang Kai-shek. They realized from the outset that the development of aviation transportation was essential to the unification of Free China in peace and vital to the defense and survival of Free China in war. The constant support which they gave to CNAC during its many periods of crisis will never be forgotten by those of us privileged to receive it.

A FEW WORDS ABOUT CHINA NATIONAL AVIATION CORPORATION



William D. Pawley, President

For two decades - between 1929 and 1949 - the valiant pilots of China National Aviation Corporation flew the most dangerous routes on earth to keep the lifeline open between Free China and the rest of the world. CNAC pilots operated the perilous run between Hongkong and Shanghai during the early part of the Sino-Japanese War, carrying vital Chinese Government documents, bullion, banknotes, and key military and civilian personnel over skies dominated by the Japanese Air Forces. CNAC became one of the only airlines in the world that flew by preference during bad weather, since cloud cover, fog and squalls gave these intrepid airmen a margin of safety against marauding Zeros.

When the Japanese attacked Hongkong immediately after Pearl Harbor CNAC pilots manned their controls day and night until Hongkong fell, to get as many Chinese patriots as possible from the captured city to safety. After America's entry in World War II, CNAC pilots carried a major share of the cargo needed for the survival of Nationalist China from Assam to Kunming and Chungking. Flying the Hump meant traversing the Himalayas, the most formidable mountain barrier on the surface of the earth. These flights were made in planes without pressurized cabins and with inadequate protection against the massive icing and other hazards of these high altitudes. While the planes had excellent automatic radio direction finders, their electronic equipment was wholly inadequate by today's exacting standards.

Some pilots crashed and were killed in this pitiless terrain. Others were forced down, either in the icy, inhospitable Himalayan ranges or else in the treacherous jungles of Assam. These casualties would often have to make their way on foot, partially disabled by the forced landings, ill-equipped with food, medicines and survival gear, through unknown country. After weeks of struggle and suffering, the lucky ones might encounter some wandering primitive tribe friendly enough to guide them to a military outpost.

The final phase of CNAC operations, again based in Shanghai and Hongkong, involved supplying Chinese cities, cut off by the Communist forces, with the food, medicine and supplies necessary for continued resistance. As the Chinese story moved toward its tragic conclusion, wily Red agents, who had infiltrated the line's operations, and opportunistic defectors succeeded in hijacking twelve of the company's twenty aircraft and turning them over to the Communists.

The history of CNAC is one of adventure and heroism spanning one of the most decisive periods in modern times. It is one that should be written and preserved as an inspiration to new generations of Americans. The pages that follow do not deal primarily with the achievements and vicissitudes of CNAC as a business venture,* but rather with the experiences of the pilots and ground-crew men who risked death to keep the China lifeline open. The emphasis will be on the struggle of living men against an implacable enemy and a hostile environment.

Everyone who took part in the CNAC adventure will recall the generous and wholehearted support which Generalissimo and Madame Chiang Kai-shek gave our operation during the turbulent years of China's twin ordeals of invasion and civil war. They never faltered in their deep conviction that the creation and maintenance of a modern network of civil aviation was an essential prerequisite of survival to Free China in wartime and for her development into a prosperous democratic society in peacetime.

In this and succeeding issues, we plan to publish stories written by participants and eyewitnesses. Editorial changes will be kept to the minimum necessary to achieve correct grammar and narrative clarity.

With the relentless advance of time, memories fade and history passes into oblivion. Those men still living who flew or otherwise served the CNAC routes into China are earnestly invited to submit for publication any adventures they experienced or witnessed which seem to them worth preserving. I should like particularly to request the Chinese pilots, co-pilots, crew men and staff who took part in these events to submit contributions since we have a



Dum Dum Staff

disproportionately small amount of material from that source. It is not necessary that these narratives be in the polished style of the professional writer, for it is the substance, not the form, which is all-important.

Many wonderful stories have been sent me which could not be included in this issue for reasons of space. Let me assure those who submitted them of our gratitude and intention to publish them in succeeding issues.

*William M. Leary, Jr., Assistant Professor of History at Victoria University in Victoria, British Columbia, is working on a history of CNAC which he hopes to have published in 1971.

A BRIEF CHRONOLOGY OF CNAC

The history of China National Aviation Corporation falls into four broad periods:

Between 1929 and the beginning of the Sino-Japanese war in 1937 CNAC was based in Shanghai and flew normal commercial routes.

Between 1937 and the fall of Hongkong to the Japanese in December 1941 headquarters were first in Hankow then in Hongkong. CNAC flew the dangerous route to Kunming, Chungking and Rangoon, relying on night and bad weather for protection against the Japanese.

From 1942 to 1945 CNAC was based in Calcutta and flew vitally needed supplies over the Himalayas from Assam into Free China.

From 1945 until 1949 the airline operated successively from Shanghai and Hongkong. It attempted to re-establish its prewar normal commercial business and flew supplies for the Chinese Nationalist Government during the civil war against the Communists.

The airline was originally known as China Airways, an American-owned company financed by Curtiss-Wright and part of the group of companies controlled by C. M. Keys. Given an exclusive contract to carry the mails between Shanghai and the three key Chinese cities of Hankow Peiping and Canton, the company started operations late in 1929,



Building a runway with Chinese labor

but ran into immediate and serious conflicts with the Chinese Government.

In 1930 the Keys interests sent Max Polin, a businessman with broad experience in the Orient, to China to ascertain the nature of the trouble and renegotiate the contract. Polin concluded that the root of the difficulty was Chinese reluctance to allow a foreign airline to fly strategically important routes within China. Accordingly China Airways was dissolved and China National Aviation Corporation took its place. The new organization was a path-breaking innovation in American foreign investment policy in that majority control was vested in the Chinese Government. CNAC was 55% owned by the Nationalist regime and 45% by Intercontinent Corporation, representing Curtiss and Keys interests. China appointed a majority of the CNAC board, but control of operations was left in American hands.

The parent corporation, Intercontinent, was initially under the leadership of Captain George Conrad Westervelt, U. S. Navy Retired. I succeeded him as President of the organization.

When I came out to China in January 1933 to reorganize CNAC, one of our greatest assets was our splendid staff of pilots and maintenance men. Of these unforgettable people who served the airline and Free China so superbly, Cecil Sellers was killed in an air crash and Harry Smith, after contracting typhus on an overnight layover in Chungking while serving as personal pilot for Generalissimo Chiang Kai-shek, died and was buried in 1938.

William Langhorne Bond, Vice President of CNAC, now lives in Virginia. Elmer M. Allison, Pilot and Operations Manager, is now retired and lives in California. Among the

other pilots of that era, I recall Eric Just, who returned to wartime Germany to serve in the Luftwaffe, Eddie Smith and Charles Vaughn, who are now retired, and Howard Norris, who apparently died of natural causes in the early 1940's. Among our outstanding maintenance men were Oscar Wilke, Chief Mechanic; Arnold Weir and Charlie Day, who died in China; and "Swede" Larson, George Hamill and Dick Welch.

On arrival in China I soon found that I could count on the enthusiastic cooperation of the Generalissimo, Madame Chiang Kai-shek and Finance Minister H. H. Kung to support my plans to expand CNAC routes and operations.

Later that year Pan American Airways bought control of CNAC to use it as a feeder line for a projected globe-girdling air transport network. Juan T. Trippe, Pan American's dynamic President, had originally hoped to use the great circle route over the Arctic, but this plan foundered on Japanese and Russian refusal to allow transit over their territories. Trippe then decided to build his trans-Pacific route from California to Honolulu, then Midway, Wake, Guam, Manila, Hongkong or Macao, and Shanghai.

At the time Pan American took it over, CNAC relied primarily on Loening amphibians for its main Shanghai-Nanking-Hankow route. The lack of adequate airports and emergency landing strips dictated using seaplanes or amphibians which could land and take off on any sufficiently large body of calm water. When the route was extended to Chungking, CNAC's skillful pilots had to fly over the Yangtze Gorges, which stretch for some 200 miles, confining the turbulent river between sheer canyon walls that rise 3,500 feet from its surface.

The Loenings were sturdy workhorses and admirably fitted for this difficult run. Nevertheless, Pan American soon began adding other aircraft to its China fleet and by 1937 CNAC had seven amphibians (one Sikorsky S-43, two Douglas Dolphins and four Loenings) and twelve land planes (two tri-motored Fords, five Stinsons, four Douglas DC-2's, and one Stearman trainer.)

In late 1933 Harold M. Bixby, Pan American's Far Eastern representative negotiated an extension of CNAC operations to include the Shanghai-Canton route. Two major accidents, one involving four fatalities, followed. CNAC's unenviable safety record during the first years of Pan American Airways control was due, in part at least, to the reluctance of the parent company to adopt instrument flying and to the fact that it sent pilots out to China who had had no training in this field. CNAC was soon obligated to swallow its pride and install the Telefunken radio direction finders which its German-financed competitor, Eurasia Aviation Corporation, was using with excellent results.

Pan American Airways was not able to launch its trans-Pacific flights to the Chinese mainland until April 15, 1937. Four months later the Japanese attacked Shanghai and in November, despite stubborn and heroic Chinese resistance, the city fell. Nanking was taken the following month and the Chinese Government moved to Wuhan, adjoining Hankow. The new capital fell to the invading enemy on October 25, 1938 and, from then until the close of World War II, the seat of the Chinese Nationalist Government was Chungking, 900 air miles up-river from Shanghai.

The initial effect of the Sino-Japanese War on CNAC was disastrous. All routes north of Shanghai had to be abandoned after the Japanese assault on the city. The eastern terminus of the line was shifted successively from Shanghai to Nanking

to Hankow and finally to Chungking. The mileage flown in 1938 was about half that flown the previous year.

During the long retreat into the interior CNAC's planes were among the last to evacuate China's cities. On October 22, 1938 the Chinese Government advised CNAC that Wuhan could not hold out against the Japanese attack for more than three days. Chief Pilot Charles L. Sharp, who would later become Operations Manager, and Pilot Royal Leonard flew top personnel of the Chinese Government to safety, taking off from a field scarred with bomb craters and illuminated at night only with seventeen oil lamps. Flying almost continuously, with only five hours sleep in twenty-four, Sharp and Leonard carried 30 passengers on each trip in planes with a load capacity of fourteen. Generalissimo and Madame Chiang Kai-shek stayed in the blazing city until the last moment. When the Generalissimo's personal pilot, a German named Eric Just, refused to evacuate them on the grounds that he did not know the terrain and had no experience with night flying, Charles Sharp took over and flew them to safety.

For the first year of the Hongkong-Chungking route CNAC made daylight runs, on the theory that the Japanese would not attack unarmed commercial planes. Then, on August 24, 1938, Pilot Hugh L. Woods flew out of Hongkong with a crew of four, carrying fourteen passengers. In clear skies with the CNAC wing markings plainly visible, five Japanese planes forced Woods to make an emergency landing in a river and then methodically raked the plane back and forth with machinegun fire, killing thirteen passengers and two of the crew. Woods and the radio operator crawled out of the stricken plane, swam to shore and escaped with their lives. After that, all flights were at night over Japanese-occupied territory in total darkness.

Gradually new networks were created, linking Free China with the outside world. The main artery was Chungking-Hongkong. A route from the wartime Chinese capital to Kweilin was established in December 1937; Kunming was connected the following year, and Lanchow with a linkage to Soviet Siberia, was reached in 1942. The DC-2's that flew the Hongkong-Chungking route brought an average of 10 million Chinese dollars into the beleaguered capital nightly. These banknotes, which were absolutely essential to the continued functioning of the regime, were printed in England and the United States. CNAC flew wolfram into Hongkong to be processed into tungsten in the United States. Almost all Chinese officials and foreign emissaries to China traveled by CNAC. The enormous volume of documents needed for China's international transactions and foreign relations were carried by the airline.

Immediately after Pearl Harbor the Japanese bombed Hongkong, destroying three of CNAC's DC-2's and four of its Condors on the ground. Thousands of terrified people, aware of the Japanese habit of summarily beheading anyone on their blacklists, clamored for safety on the CNAC lifeline. The executive staff improvised a priorities system and by nightfall of Monday, December 8th, which was Pearl Harbor Day Pacific Time, CNAC was flying its two DC-3's and one DC-2 around the clock. Vital supplies, needed for airline operations, which had previously been obtained in Hongkong, now had to be flown to Kunming or Chungking. Dozens of top Chinese officials, who were trapped in Hongkong, had to be evacuated before the city fell. Two of those whose priority was not high enough to get a flight out were Eugene Pawley and columnist Joseph Alsop; they had to stay behind in Japanese-occupied Hongkong.

When Madame Kung reached safety, news cameramen

photographed her alighting from a CNAC plane, followed by a retinue of Dachshunds. There was an immediate international outcry against Madame Kung for having given her pets priority over human lives. However, the Dachshunds did not belong to Madame Kung, who was allergic to dogs, but to the CNAC staff. The animals had been fitted into niches and corners in the plane which not even a dwarf could have got into.

The wartime capital of China had been virtually TERRA INCOGNITAS to the West. Few Americans had ever been there. To reach it, one had to take a three-months trip by boat, in the course of which the passengers disembarked at the Yangtze Gorges, while gangs of coolies hauled the boat over many miles of rapids and turbulent water. The U.S. gunboat, MONOCACY, had made the trip upriver in 1931, but Navy officials decided not to risk the journey downstream, and it was abandoned there.

In late 1940 or early 1941, it became evident that alternate supply routes into China would be needed since the British foothold in Hongkong was precarious. CNAC assigned Charles L. Sharp and Hugh L. Woods to reconnoiter a new lifeline. As Captain Woods saw it, there were four fundamental requirements: The new air base would have to be at or near a seaport, riverport or railhead; the distance into China would have to be within range of the aircraft and short enough for economic operations; the base had to be comparatively secure from Japanese attack: it had to be in a country which would permit CNAC to operate.

The obvious choice was the tea-producing region of Upper Assam in India. This meant that CNAC planes would have to fly over the roof of the world without weather forecasting and exposed to such terrible hazards as polar air masses which could assume the form of violent blizzards and 125

mile-an-hour crosswinds. General Henry H. ("Hap") Arnold, Chief of the Army Air Corps, was convinced by Brigadier General Clayton Bissell that the Assam-Chungking route was not feasible. Bissell proposed instead a 4,000-mile leapfrog operation from New Delhi and thence parallel to the main Himalayan ranges on the Chinese side. Had this alternative been adopted, it would have involved minimum pay loads and might well have forced China out of the war.

Captain Woods made the first exploratory flight from Assam into Free China, noting the locations and elevation of all mountain ranges. Frank ("Dude") Higgs, the prototype of "Dude" Hennick in Milton Caniff's "Terry and the Pirates" comic strip, was co-pilot and Joe Loh was radio operator. The only passenger was CNAC Vice President William Langhorne Bond.

In April 1942, operations began in Dinjan, a tea estate which would become the main Assam base of CNAC, under the direction of Captain Woods. Two C-47's were used to evacuate military and civilian personnel trapped in Burma by the advancing Japanese. During the Burma campaign, CNAC dropped food to Chinese columns assigned to relieve beleaguered Allied forces. When the Ledo, or Stilwell, Road was being built, CNAC dropped rice to the construction gangs.

In July 1942, the contract of the American Volunteer Group ("Flying Tigers") expired and many of these superb pilots joined CNAC to fly the Himalayan route. CNAC flew American planes only, starting with Douglas C-47's and C-53's and then adding Curtiss C-46 transports to its fleet.

By the spring of 1943, CNAC had a roster of 58 Senior pilots. Fifteen of them were former Flying Tigers; 17 had been with Pan American; eight had been associated with Air

Transport Command; six were from the Royal Canadian Air Force, and two from the Royal Air Force. Nine of these Senior Pilots had Chinese surnames and a large number of Chinese Co-pilots were assigned from the Chinese Government aviation schools. At the time, CNAC had 175 radio operators and a maintenance force consisting of sixteen Americans and 350 Chinese mechanics.

C. L. Sharp was in charge of CNAC operations from Calcutta and H. L. Woods was the Divisional Manager responsible for Sadiya and Dinjan operations. W. C. McDonald was Chief Pilot, Robert Pottschmidt and Frank Higgs were Operations Assistants.

CNAC began flying the Hump from Assam before Air Transport Command used the route and, during the first year after Pearl Harbor, it carried the lion's share of Lend Lease supplies into China. At peak operations, the airline had over 60 planes manned by 200 flight crews.

From April 1942, when the Burma Road was lost to the Japanese, to April 1945, CNAC made over 35,000 flights over the Hump. In 1944 alone, the airline flew 9,000 round trips, or 10 million miles, along this route, delivering 35,000 tons of Lend Lease goods and other strategic cargo. In that year, it carried 38% of all strategic cargoes on air routes, ranking second only to Air Transport Command.

The Air Transport Command operations, which assumed such preponderant importance during the last year of the war, were under the command of Lieutenant General William H. Tunner, who would later be in charge of the Berlin Airlift (1948-49) and the 1950 cargo Korean Airlift. Under General Tunner's leadership, ATC and CNAC cooperated closely.

After, VJ Day, CNAC returned to Shanghai to resume

normal, commercial airline operations with Woods as manager. The advance of the Chinese Communists made this return to normal conditions impossible. CNAC planes assisted the Chinese Government by flying needed cargo drops to besieged garrisons, but the Red tide continued to advance. Shanghai was evacuated and the airline again moved its headquarters to Hongkong. There most of CNAC's fleet was stolen by Communist agents and the remaining aircraft of the company were grounded in a labyrinthine maze of lawsuits and countersuits.

Despite the tragic end to the CNAC story, those of us who participated in that great adventure can derive satisfaction from the fact that we played an indispensable role in linking Free China with the outside world and ensuring her survival during the last decade of her existence as a democratic republic. The fine work of the China National Aviation Corporation Association and of the Hump Pilots Association has helped to keep these memories alive in our hearts.

THE CHUNG

By W. C. McDonald, Jr.

In the latter part of July 1942 General Chennault sent CNAC a message, urging us to adopt an insignia and put it on all our planes to help the 14th Air Force pilots in identification. Captain Sharp called in Z. M. Wong, Y. Y. Zee and me and directed us to get this job done immediately. After considerable discussion our CHUNG was born. We painted the CHUNG on all our aircraft in short order, so advised General Chennault and sent him photographs of our planes with this character on them.

I believe it is fitting to include the story of the CHUNG in this first issue because it is this symbol which saved many of us from being shot down by Allied pilots and because it has also played a vital role in keeping the CNAC Association together.

CHUNG is a Chinese character which means "in the middle of" or "the center," or, as applied to our CNAC aircraft, "MIDDLE KINGDOM SPACE MACHINE FAMILY."

The CHUNG has adorned many CNAC aircraft: DC-3's, C-47's, C-53's, C-46's and DC-4's. Its real claim to fame is the thousands of flights it made with precious cargo over the Himalayas. It has also flown the Pacific and around the world and is still "in the center" of the hearts of CNAC people.

ORGANIZING THE ASSAM AIRLIFT INTO CHINA

By H. L. Woods



H. L. Woods

When I arrived in Upper Assam in April 1942 to help evacuate Allied troops from Burma and to drop rice to isolated British and Chinese forces there, I realized that we had better prepare for a large and rather long period of operations. Upper Assam was, in my opinion, the logical departure point for a new airlift into Free China.

I rented a couple of bungalows from assistant managers of tea gardens. We bought three Chevrolets and one Ford sedan, which was all the ground transportation available for purchase at that time. Shortly after we acquired some Jeeps and command cars, also a couple of six-by-six trucks, but ground transportation was always in short supply. Scrounging spare parts for the motor pool and for aircraft became a way of life. It was sometimes politic not to inquire too closely into the source of supply or the methods used in acquiring certain critical parts. I assumed that the end justified the means. Cannibalizing equipment was the line of least resistance, but we avoided it as much possible.

Our operation required making on-the-spot decisions and a lot of improvising. Fortunately, I was given almost complete autonomy. We had no financial problems since the Chinese managing director set up a 100,000 rupee revolving fund for me, which was replenished as soon as I submitted paid bills.

After the monsoon season ended in the autumn of 1942, the Japanese started moving northward through Burma and it became apparent that we could expect enemy air raids at any time. No effective warning system had been devised. I decided to build a small dispersal strip where we could leave our planes when they were not actually loading or refueling. Accordingly, we constructed a 2,400 feet landing strip four miles west of the Dinjan airport in a place named Balijan. This served its purpose admirably until we discovered that dust was getting into the carburetors of the aircraft and causing their engines to lose power. Actually, we lost our first plane for this reason, but fortunately the two crew members aboard, Captains Laughlin and Bartling survived.

Several Japanese raids hit Dinjan without warning, but CNAC suffered no casualties or loss of equipment on the ground in Upper Assam during the entire war. Yet I was severely criticized by Vice President Bond for allegedly wasting company money on the dispersal strip. Dinjan had a devastating air raid the day his letter arrived and the next mail brought us a warm letter of commendation from the Chinese Managing Director for having saved all our staff, aircraft and equipment.

Since there were reports of Japanese infiltration and sabotage at this time, Civilian Police Commissioner Rutledge decided I should have armed guards for the dispersal strip. I agreed and authorized him to recruit a small force of about fifty men, consisting of Gurkhas, Sepoys and other native ex-soldiers, who had been British trained, but had either retired or failed to re-enlist. I provided the funds for salaries, uniforms, messes and accommodations and all other costs, while Commissioner Rutledge assumed responsibility for their arms and guard duties.

I was obligated to inspect my "troops" occasionally, a

duty which I performed with considerable trepidation. I have never spent a day in the military service and walking up and down in front of a file of men standing at strict attention made me feel ridiculous. I never knew what to do with my hands. When I approached their barracks, the word would spread that the "Burra Sahib" (Burra meaning "big, great large" or, in this case, "number one") was coming and the clattering and confusion that ensued was something to behold.

When we first arrived in Upper Assam, Police Commissioner Rutledge viewed us with considerable apprehension and distrust. He was supposed to keep close tabs on the arrivals and departures of all foreigners and I was supposed to notify him in advance when our people were about to enter or leave the district. Unfortunately, Operations in Calcutta usually failed to notify me in advance of personnel changes and this kept me in almost continuous hot water.



Tea Plantation Headquarters

Finally I fixed things so we had no further trouble. Mrs. Rutledge had a set of false teeth that must have been made

by the local blacksmith and which nearly drove her wild. I had the brilliant idea of phoning the U.S. Military Dental Corps, which had just set up an installation at Chabua Air Base. I asked to talk to their top man and announced that I was Captain Woods, a name which rang no bell in his mind. I told him that, in accordance with instructions from my superiors to do my utmost to improve relations with the local civilian population, I would appreciate it deeply if he would make a new set of dentures for the Police Commissioner's wife. He agreed and I took Mrs. Rutledge to Chabua. The dentists then proceeded to make her a beautifully fitting set of false teeth. To say that Commissioner Rutledge was grateful would be a gross understatement. The issue of CNAC staff moving in and out of Upper Assam without previous notification was never brought up again, partly due, I am sure, to a more tranquil atmosphere in the Commissioner's residence.

SMUGGLING OVER THE HIMALAYAS

No story of the Hump operation would be complete without devoting a considerable part of it to smuggling. The Japanese blockage of China caused a critical shortage of medicines, toilet articles, clothing, ballpoint pens and hundreds of other articles which were not manufactured in Free China, but which had found general acceptance there. All of these items brought from ten to twenty times their cost on the Chinese black markets.

To the Chinese, who are born merchants, the temptation was irresistible. I doubt there was even one solitary Chinese who refrained from getting involved in black market operations merely because they were illegal and had an upsetting effect on the general economy. Only the penalties for getting caught or the risk of losing their investment through detection and confiscation operated as deterrents to those few who were not somehow connected with the business.

Right at this point let me emphatically add that the illegal traffic was by no means confined to the Chinese. Many Americans, both in CNAC and in the U.S. armed forces, feathered their nests in the same fashion. In fact, some of the now prosperous and prominent CNAC alumni augmented their salaries with certain activities which they still do not care to discuss.

Just as our story would be incomplete without reference to smuggling, leaving "Customs Smitty" out of the picture would be a gross omission. Mr. Smith of the Indian Civil Service Customs Branch arrived at the Dinjan base, along with half a dozen rather inconspicuous and ineffectual assistants, shortly after our operation began. He immediately informed me that neither he nor his officers were to be taken lightly. Of mixed European and Indian ancestry, he had a dark complexion, but spoke of going home to Scotland on leave.

Smith was rather intelligent and extremely sensitive and, while not overbearing or belligerent, wanted to make it quite clear that he must not be ignored or overlooked. It didn't take me long to realize that dealing with him would require considerable tact and diplomacy. I take pride in the fact that, when he became convinced that I recognized his position of authority and was walking the straight-and-narrow as far as my own personal activities were concerned, a rapport developed between us which made life smoother for both of us. Cooperation reached the point where my O.K. on a piece of mail or package was recognized officially and no further questions or inspections were required by the Indian authorities.

The really delicate relationships were between the Civilian Police, Customs and ourselves. Keeping on good terms with

"Customs Smitty" was a project in itself. There were rumors that customs agents received up to 25% of the value of contraband they confiscated, although this was vehemently denied by Smitty. Nevertheless, his diligence appeared to be above and beyond the call of duty.

The ingenuity used in the smuggling operations seems incredible. To this day, some of the methods used are a well-kept secret. Gold bars were cast in the form of engine and propeller parts and actually used in the flight to China, where they were removed and replaced by confederates. Foreign currency bills were individually rolled into tight cylinders about the size of a kitchen match and inserted into the loops of corrugated cardboard boxes. After having been steamed off, the edging tapes would be carefully replaced. Inspection plates on the aircraft were removed and pigeon cargo inserted inside the wings so often that the retaining screws and latches would wear out and have to be replaced regularly. When the smuggled goods were placed in these concealed niches they were usually secured to some structural member so located that retrieval on the China end of the run would be prompt and easy. Quite frequently, the package would break loose from its mooring and the contraband articles would float freely inside the wing, center section or fuselage sections of the aircraft, never to be discovered unless the plane crashed. Even long after the war, plane crashes would sometimes result in strewing nylon hose and toilet articles all over the ground.

Some of our aircraft losses may have been caused by jammed controls, but this could never be proved. There is, however, no doubt in my mind that the smuggling activities were the direct cause of at least one or two plane losses, maybe more. Pilots would plow into storm conditions and ground fog, motivated by something more than desire to

complete a routine trip. Later, rumors and scuttlebutt would confirm our suspicions. For these reasons, I decided to take a hard line against smuggling of all sorts.

"Customs Smitty" and his crew usually made their aircraft inspections in the wee hours of the morning. I never knew what to expect from him when I arrived on the field. If he had made a good haul, he would be jubilant. If someone had given him a hard time or had given his mat-shed office a good dusting while taxiing, I would be in for it.

One morning, I arrived to find him and his whole staff crawling through the weeds and underbrush near the field. It developed that one of the Chinese crew members had had several gold bars attached to his body in the vicinity of his private parts. When the customs search reached that portion of his anatomy, he turned and ran for the bushes as hard and fast as he could. In his panic some of the gold bars broke loose and started to fall out of his trouser leg. When the customs men abandoned pursuit to hunt for the gold bars, he escaped.

On another occasion, I found Smitty on Cloud Nine when I arrived. He had discovered a new hiding place for gold bars. This was in the control cable channel in the top of the tail section as far aft as the cables ran. The spot could not be visually inspected, but could be reached by hand by crawling into the tail section and reaching overhead. That morning's search had produced several gold bars which Smitty was displaying with delight. It was one of his best hauls. He was ecstatic.

On the following morning, our relationship hit its absolute nadir. Looking back on the occasion, I believe I detected the charged atmosphere even before I entered the airport. Smitty was waiting for me with his black eyes practically spitting fire

and his ebony complexion livid. I finally pieced the story together from his incoherent recitation. It seems that some Chinese, in anticipation of the search had done his business on a shingle and inserted it in the place where Smitty had to reach with his hand during the inspection. That morning, I discovered the true meaning of the old Navy expression, "There was hell to tell the Captain."

There are enough tales relating to smuggling and pigeon cargo to fill a large volume and doubtless some of the other contributors to this story will have anecdotes to add.

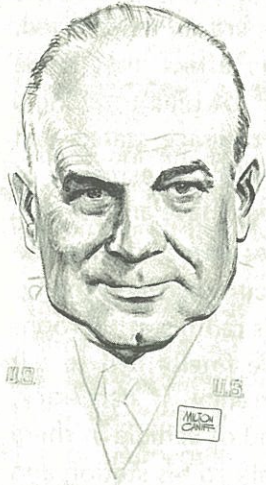
Not the least part of my job was to maintain amicable relations among all parties. Within our own organization, there was the ever-smouldering jealousy and rivalry between the Americans and the Chinese, who were sensitive to any slight or demanding attitude or word. Then we had the problem of maintaining good relations with the U. S. military forces. Some of the old cavalry colonels who had been called back into service after retirement looked upon us as a bastard outfit and the fact that we were outperforming the military rankled them. Only one or two caused us any real inconvenience. Most were glad to be able to study our methods in order to improve their own. Some of the local British tea planters resented our intrusion; most were cooperative. As for the native Indian population, very little friction developed with them that couldn't be adjusted promptly.

A considerable part of our Hump cargo consisted of Chinese currency, which was printed in the States, boat-shipped to India, and flown to its various destinations in China. On several occasions, a load of currency was jettisoned due to engine failure or icing conditions. This always caused uproar and required a detailed explanation of why the action was necessary

On one occasion, a load of currency was jettisoned over northern Burma near a small isolated village named Ft. Hertz, where CNAC maintained a radio station. A Chinese by the name of S. S. Lam was in charge and a more honest, conscientious and well-meaning radio operator never lived. Our first message from him was to the effect that some natives had brought in a certain number of bills totalling a certain amount. About a day later, his message stated that several packages of money had arrived with an estimate of their value. The next two or three messages gave an estimate of the size of the packages. Then messages arrived, giving the estimated height of the pile that was accumulating. Finally, desperate messages arrived stating that his radio station room and living quarters were jammed full. We finally had to tell him to stop worrying and burn the currency, if necessary, because it was impossible to send any kind of vehicle in there to cart it out. Lam himself had had to walk to his station and have his equipment carried in by coolies. Later, a small grass landing strip was built at the station.

(The concluding half of Captain Woods' narrative will be published in the next issue.)¹

LT. GEN. J. H. ("JIMMY") DOOLITTLE'S STORY OF HIS EXPERIENCE WITH CNAC



James Harold Doolittle

On May 5, 1942 I flew in a CNAC converted, bucket seat, DC-3 from Chungking to Calcutta. The pilot was Chinese and, as I recall, came from San Francisco. His name eludes me, but it was something like "Chen" ¹

Two hours out of Chungking, enroute to Kunming, we were warned that there were Japanese fighter planes close about, so we landed immediately in a pasture and all of us, Pilot, copilot and six passengers, took cover in a nearby dry irrigation ditch.

After a short while we proceeded to Kunming. There we were met by Claire Chennault. He and I had been promoted to brigadier general on the same order and he had no stars so I gave him mine. (I'd been given mine in Chungking by Clayton Bissell who had an extra pair).

We flew on from Kunming to Myitkyina where we intended to pick up fuel. I had been briefed that morning that the Japanese intended to take Myitkyina that day and so advised the pilot. Despite the warning he decided to land. The south side of the town was already under attack by the Japanese and the gasoline service crew had fled so we had to proceed without fuel.

While at Myitkyina the plane was charged by refugees who

wanted to get away from the Japanese. Police quickly got the mob under control and the pilot finally took aboard some sixty of them-mostly old men, women and children-each with their pitiful belongings wrapped in a small bundle and we took off.

Upon arrival at Calcutta, after dark and almost out of fuel, we found four more refugees had-unknown to the crew stowed away in the baggage compartment. This is probably the most people a DC 3 has ever carried. Most of them, of course, sat on the floor.

Total flying time to Kunming was two hours and fifty minutes, from Kunming to Myitkyina two hours and twenty-five minutes and from Myitkyina-at minimum fuel consumption-four hours and twenty minutes.

It was Captain Moon Chen-Editor 1

FIRE WHILE AIRBORNE — 1930 By E. M. Allison

It happened early one morning in clear and cold weather with a load of three Chinese passengers and about 400 pounds of mail. It was my second fire in the air and by far the worst.

About one minute after take-off from Hankow raw gasoline started spraying into the cockpit and also into the mail compartment, which was in the hull below the cockpit level. I signalled the co-pilot immediately to close the

gasoline valve. Then there was a tremendous explosion and fire enveloped us. The co-pilot lowered the landing gear. While the propeller kept turning and pumping more gasoline into the raging fire, I signalled to the co-pilot to get out on the wing to escape being burned to death. By this time, we were only a few feet above the ground. As the co-pilot crawled out on the wing, I managed to land the plane in a cotton field.

I remembered that years before a friend had crashed in Woodward Pass, Pennsylvania, and his plane had caught on fire. He was taken to a hospital, apparently with only minor burns, but four days later, he began to hemorrhage from his lungs and died soon after. Evidently, he had swallowed flame, and hot gasses had irreparably damaged the tender lung tissue.

This tragedy had made a tremendous impression on me and I had resolved to do everything possible to avoid that sort of death if my plane caught fire. I held my breath for the few moments it took to land the plane. I believe it was this action which saved my life.

Once out of the aircraft, I put out the fire blazing on my outer clothing. Since my coat had been partly open at the throat, flaming gasoline had ignited some of the fleece lining and I had to extinguish the fire inside my coat. Next, I grabbed the fire extinguisher and put out the blaze inside the mail compartment.

Paul Bear, the co-pilot, was unhurt, and I had only a few blisters. Neither of us subsequently developed lung hemorrhaging. Ray Ott, our station manager at Hankow, had seen the fire and emergency landing and realized something was seriously wrong. He drove across the cotton field and

together we checked the plane. The main damage was to the engine ignition system most of the insulation having burned off the sparkplug leads. After taping this as best we could, I flew the plane back to the Hankow field. Examination of the plane there showed that a rupture in the gasoline return line had caused the spray of fuel and consequent fire. Later that day, I dropped the passengers and flew the aircraft to Shanghai with mail only.

FORTY-SIX DAYS TO DINJAN From a CNAC report

Late in the afternoon of April 7th, Captain Hugh L. Woods, Division Superintendent at Dinjan, realized that Plane No. 58, with Captain C. Joseph Rosbert, Co-pilot C. Hammill and Radio Operator Wong as crew, was definitely missing. Captain Rosbert had radioed one and a half hours after takeoff that, because of severe icing conditions, he was returning to the Assam base. No further messages were received and the aircraft did not return.

About a month later, the United States Army informed Captain Woods that information had been received that Rosbert and Hammell were safe, but that Wong had been killed, and that the survivors were walking from the scene of the crash to a pick-up point for return by air to Assam.

Forty-six days after their mishap, Rosbert and Hammell arrived at Dinjan and were flown next day to Calcutta for rest and recuperation. The account which follows is based on their combined narratives.

Finding that he was accumulating about five inches of ice on the windshield and leading edge of his wings while flying southeastward at 16,000 feet, Captain Rosbert turned around and tried to return to Assam. He lost altitude until he reached 13,000 feet, where the ice began to melt. He then levelled off and proceeded. While flying a course of approximately 290 degrees, he encountered strong crosswinds which shifted the plane about 75 miles north of course. During all of this time, they were flying on instruments.

Suddenly, through a hole in the clouds, Captain Rosbert saw a snow covered mountain dead ahead. Grabbing the controls from Co-pilot Hammell, he pulled hard on the wheel, kicking full rudder to try to miss the mountain. The ship scraped across the very peak of the mountain, ripping long gashes in the fuselage, knocking off propellers, and causing the plane to go suddenly into a long dive on the far side of the peak. Completely out of control, the aircraft plowed into a snow drift, throwing snow skyhigh. The right motor flew off its mount and crashed on down the snow covered mountainside to come to a stop two hundred yards below.

When the plane crashed, Rosbert and Hammell had their feet braced against the controls. Both men suffered broken ankles. Hammell also received lacerations on his left arm and on the left side of his face. Rosbert had minor abrasions. The radio operator, Wong, had been trapped in the mangled wreckage of the front part of the plane and was dead.

Hammell rushed to the rear door calling to Captain Rosbert to abandon ship in case of fire. But there was no fire; they were merely marooned in the Himalayas. They attempted to operate the radio, but all instruments were out of commission. They tested the snow, but it was too deep and soft to walk in. The plane and the mountain peak were still enveloped in deep fog.

They decided the only thing to do was to remain inside the aircraft. They opened the three parachutes and wrapped themselves inside them to resist the intense and biting cold. For five days, they remained trapped by the soft snow and fog, inside their freight plane, with temperatures below zero. There was nothing to do but wait. Hammell took out a deck of cards and they played gin rummy to pass the time and soothe their troubled minds.

Rosbert was carrying a quart bottle of Coca Cola syrup to a friend in China. While playing gin rummy, they would crawl to the door, dip their thermos cap into the snow and then flavor the snow with Coca Cola syrup. This made a pleasant desert. The only thing lacking was the main course. They used the one shoehorn they had for a spoon and shared a toothbrush.

Hammell found another use for the snow. With his right ear practically cut through, severe lacerations on his left cheek and minor abrasions over his left eye, he packed his wounds with handfuls of snow. He said he thought it couldn't do any harm and, since it felt good, he continued to apply snow until the bleeding stopped. Apparently this was the right thing to do, since the wounds healed and there was very little infection.

After five days, they tossed their cards in the corner,

1966 Reunion



1968 Reunion



1962 Reunion



1964 Reunion

1956 Reunion



1959 Reunion



placed the empty Coca Cola bottle safely between two crates, offered a farewell salutation to Radio Operator Wong, and prepared to abandon ship. They tore the silk parachutes into strips and wrapped their feet and hands in them. Then they ripped the floor boards loose from the cabin to use as sleds.

By sliding on the boards and by lying on the snow lengthwise and rolling down the side of the mountain, they managed to get out of the snow and reach the timber line. If they had not been able to wrap their hands and feet in the parachute silk, Rosbert said, they would have suffered terrible snowbite and possibly have frozen their arms and legs, which would have meant almost certain death.

They proceeded down the mountain side as twilight approached. Just before dark they found a small cave in which they decided to take shelter for the night. Without blankets of any sort and with very little clothing Rosbert and Hammell huddled close together. The cave wasn't large enough for both of them. Fighting bitter cold and raging winds, they slept restlessly with their feet outside the mouth of the cave and exposed to the elements.

The next morning at daybreak they started down the mountain side picking their way over boulders, fighting their path through heavy undergrowth, stumbling and falling, until they finally reached a stream at the foot of the mountain. It was only by following this stream that they managed to reach safety.

Following the stream bed along the bank, they found a few birds and some vegetation, herbs and nuts with which they were able partially to stave off hunger.

On the fifth day of the trek, ten days after their crash,

Rosbert's Boy Scout training brought them good luck. He caught sight of some branches, foliage and saplings that had been cut with a sharp instrument. Studying the slashed growth, he decided that a human being must have been in the area sometime during the past year. This did not necessarily mean safety, but it gave them hope and evoked the strength of will and determination to keep on struggling which they needed.

Two more days passed. They had exhausted their emergency rations three days before and were close to the utmost limits of endurance. Now they had to decide whether to keep on following the stream or to go higher up on the mountainside where there seemed to be less jungle.

Fortunately they decided on the latter course. Seven days after their abandonment of the plane they found a small native hut. Children were playing in front of the hut when these strange, dishevelled, wounded men suddenly appeared. The children screamed, ran into the house, and bolted the door. Rosbert was able to stagger as far as the door, then collapsed from weakness in front of it. Hammell, who was in better physical shape, managed to force his way into the hut, where he found the children cowering under the skirts of their mothers.

Hammell began to talk rapidly, trying to explain why they were here, that they did not mean any harm, and that they wanted something to eat. Then he realized, not only that they did not understand a word he was saying, but that the women were blind.

Relying on gestures and pantomime that would have done credit to a professional actor, Hammell managed to convey to the children that they were birds who had crashed into the

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side of the mountain, that they had been without food for days and needed something to eat. The children would translate this pantomime to their blind mothers. Finally, the natives realized that these men meant them no harm and gave them raw corn kernels to eat while the women prepared some food.

Having had no food for three days, both Rosbert and Hammell made gluttons of themselves and gorged so much of the little that was available that they promptly collapsed in a corner of the hut and fell into restless sleep.

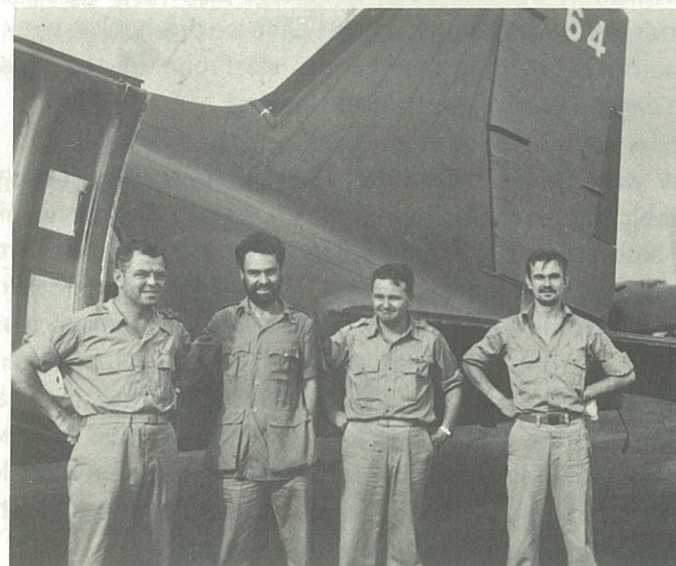
Soon men arrived at the hut. The children rushed out to meet them and to explain the presence of the strange visitors. Knowing that a British outpost was two days journey from them, they decided to send a messenger. The man chosen as runner approached Rosbert and tried to tell him to write a message. Not being able to understand their language or what they wanted, Rosbert thought that they were interested in knowing his name and wrote it out phonetically. The messenger took the piece of paper and left suddenly.

The hospitality of their new friends included corn mush, root vegetables and home-made cigarettes containing opium. After a day and a half, the runner returned, having achieved the extraordinary feat of completing a four-day journey in that time over rough and rugged country. Excited and proud, he handed Rosbert an envelope with the letterhead of the Government of India Telegraph Service. The two airmen tore it open and read the message. They were told that a doctor would be sent for them, that they were to remain where they were, and were to write down their names and the organization they belonged to and to send it back by runner immediately.

Six days later, the doctor arrived. He found that the men

had bound their ankles tightly and that they were beginning to heal. However, their legs were stiff from neither walking or doing any exercise and they were in danger of becoming addicted to the opium. Rosbert and Hammell wanted to remain with their new friends, whom they had learned belonged to the Mishmi tribe, until their ankles were strong enough to walk on without pain.

The doctor wisely refused their request categorically. They stayed another four days, but, during this time, were made to massage and exercise their legs with progressively longer and harder walks. Then they started back, accompanied by some of the Mishmi tribesmen. They would go as long as they were physically able to each day, then the sturdy Mishmi men would carry them piggyback, toting them hour after hour up and down treacherous trails.



The day they returned
Left to Right: Dr. Richards, Capt. Rosbert, Capt. Sharp, Capt. Hammell.

They finally reached the expedition camp. A U.S. Army plane flew over to drop them medicine and clothing. Unfortunately, the pilot missed his target and the bundle of mercy fell in dense jungles near the camp, where it could neither be seen nor reached without days of cutting trails through the brush.

They must hurry on, the doctor said. It was a race against the monsoons. Unless they reached safety in a few days time, the rains would isolate them and they would have to spend the entire spring and summer in the wilderness. Already the streams were becoming swollen; the ground was soft and slippery, and progress was painfully slow.

With the guidance of the Mishmi, they finally made Sadiya, the frontier town in northern Assam. Here two small Army training planes were waiting to take them to their base. They arrived in the afternoon to receive from Captain Hugh L. Woods, all the CNAC pilots, the Chinese mechanics, clerks and radiomen and the rest of the staff one of the most sincere welcomes two people ever received.

They were flown to Calcutta, where they received another royal welcome from Captain C. L. ("Chuck") Sharp and his entire base staff. The men seemed to be in excellent spirits and delighted to be back, except for the fact that Rosbert worried about his ankle, which was in much worse shape than Hammell's. Co-pilot Hammell returned to duty, but Rosbert had to be sent back to the States for further medical attention. During their adventure, the two aviators learned about two hundred words of the Mishmi language and could boast that they were among the few non-tribesmen on earth able to carry on a conversation in that tongue.

A FEW WORDS ABOUT THE MISHMI TRIBE

The Mishmis, who nursed Rosbert and Hammell back from death, gave them opium to smoke, and carried them to safety at Sadiya, are one of a group of largely Mongoloid tribesmen scattered in the forests of Upper Assam north of the Brahmaputra. They are warlike, slash-and-burn cultivators, who live in long, communal houses.

All but one of the four groups of Mishmis claim to have reached their present homeland from Tibet and China. They are polygamous, with a man's widows going to his heir, ruled by hereditary headmen, and in the habit of revenging injuries by blood feuds in which members of the offender's enlarged family, or sept, are killed or enslaved. All of them use arrows poisoned with aconite, some having long bows and others crossbows, and all believe in an underground home of the dead.

The sources consulted shed no light on why the women in the Mishni hut were blind.

LANDING IN A WALLED CITY – 1933

By E. M. Allison

The Nationalist Government wanted us to extend our Yangtze Valley route to Chengtu, a walled city more than a hundred miles upriver from Chungking. I was assigned the job of making a survey flight and getting the line in operation.

Arriving over the city in a Stinson high-wing monoplane, I saw that the field was packed solid with people who considered the arrival of the first CNAC flight a momentous occasion. Instead of the large military parade ground with ample space for a landing which we had been promised, I found I would have to come down in a small drill area, about 1,000 feet by 400 feet, tucked neatly against the northeast corner of the city wall. The southern approach to the field was obstructed by telephone lines and the northern approach was blocked by the 30 foot high wall which girdled the town.

While soldiers tried to clear a narrow path through the dense crowd, I circled the field several times. I came in, using the southern approach, then cut off the switch immediately on landing so that the crowd surging toward the plane wouldn't be hurt. The dense and excited mob swirled around the aircraft. I was afraid the plane might be damaged and told an officer to have his troops keep the people back and see to it that they didn't push against the fuselage. The officer stepped up to a soldier, armed with a rifle and fixed bayonet, who was standing under the left wing. As the soldier brought up his rifle in a smart military salute, the bayonet pierced the wing of the Stinson.

Later, we were taken to a friend's house in a limousine. The chauffeur showed us a freshly severed human finger he had found in the car. This had evidently belonged to

someone in the crowd who had had his finger in the door frame when the car door was closed. We made inquiries at the hospital and elsewhere, but never found the owner of the finger. The return trip the next day was uneventful.

FORCED LANDING IN THE MANAS RIVER

By Glenn H. Carroll

Late in the afternoon of March 11, 1944, we left Kunming in C-47 Number 81 with co-pilot Pai and radio operator Hsu plus some six to eight tungsten bars as a token load. Except for the heavy smoke-haze that is common to India and Burma at that time of year, the weather was clear. There was a partial moon. Our ground speed from Kunming to Yunnanyi was normal and the engines were performing well. Approaching Yunnanyi, it was still light enough for visual confirmation of our direction-finder bearing.

The next check point was Yun-lung and it was there that our troubles began. We received what appeared to be a good DF bearing on Yun-lung, but by then it was too dark and hazy for visual confirmation. The elapsed time between Yunnanyi and Yun-lung indicated an alarming ground speed of 70 miles per hour instead of the usual 170 MPH. The questions that immediately entered my mind were: Did I check the time wrong? Did I get an erroneous bearing on Yun-lung? Or was there actually a 100 MPH headwind? Yun-lung is in a deep valley practically in the middle of the Hump. The strong winds prevailing in the Hump could be expected to alter direction or slacken as we proceeded westward. I assumed that the headwind would not hold, but that it would nevertheless reduce our ground speed. We would be able to check the latter when we picked up DF bearings from the Assam stations.

We proceeded beyond Yun-lung on a normal course at 18,000 feet which put us well above the smoke-haze level. As soon as there was any possibility of picking up the Assam stations, I began the search for DF bearings. As we progressed we began to get Assam signals and started calling for assistance. In all cases the DF needle swung directly toward the mountains of Tibet and an aural check yielded the same bearing. During the entire remainder of the flight we never received a reliable bearing and were unable to make contact with a ground station. Flying at night, on top of a thick smoke-haze layer, with unknown ground speed, unknown wind and no navigational aids, our only chance was to hold to our course and hope for a break.

We continued in this manner until the gas needles indicated almost empty tanks. I decided that we should do something while we still had power available. We dropped down into the haze in an effort to locate ground lights. We were at around 10,000 feet and preparing to bail out when Pai saw moon reflections on water and shouted, "River, river below!" If the river was large enough, I decided we would be better off bellylanding the aircraft in the water, where we might have access to our emergency supplies, than bailing out over solid jungle.

One low pass over the water with landing lights on revealed that two streams, which issued from the Himalayan ranges, joined below us. The water was shallow, fast and turbulent; the river bed was curved, irregular and composed of large boulders. Due to our bad fuel situation, I was afraid to make more than one low-level pass because engine failure at that altitude could be fatal. We pulled up from the inspection pass to about 500 feet, held a reciprocal course for about a minute, during which time I quietly requested assistance from higher authority, made another steep turn with the

lights on, then throttled down, and landed in the water with the gear up. The curve of the river was such that we were perfectly lined up when we came out of our final turn.

The landing was smooth and the left wheel, meeting a gravel bar, gently swung us around 90 degrees to a full stop with the forward part of the aircraft well out of the water. As we flew with one generator removed, our batteries were never fully charged, but, in this instance, we had enough power for Hsu to get off two messages describing the river junction and our situation.

Pai and Hsu remained in the aircraft the remainder of the night while I donned my fleece-lined flying suit and huddled against a pile of driftwood on the gravel bar. From this vantage point, I could see anyone approaching and would have time, if necessary, to slide into the water and float away.

When daylight came, we carried our emergency supplies to the shore; laid out a large white arrow, composed of strips torn from parachutes and cargo tie-down ropes and then started down river. As I was walking in and out of the water, my Calcutta shoes soon turned to mush and had to be discarded. I replaced them with the fleece-lined flight boots and held them snug with lashings of cargo rope.

Both banks of the river were covered with thick elephant grass some eight to ten feet high. Except where there were game trails, these formed an impenetrable barrier. We were concerned about the possibility of meeting an enraged water buffalo or some other pugnacious form of wild life who would wish to dispute possession of the trail with us. Our only weapon was a flare pistol. In addition, we had, as emergency

supplies, K rations, two bush knives, a canteen, mosquito nets, and cigarettes, which I don't use.

The river was getting deeper and wider. After walking about two miles, we decided to build a raft of elephant grass stalks. The raft proved adequate for only two men, so I swam along behind, guiding the raft by means of a rope. After progressing in this way for about a mile, the raft became snagged in hip-deep water. Just as we were moving our gear ashore to proceed on foot, a large wild bull with curving horns that pointed straight up crashed through the grass to the river bank about fifty yards below us. He started toward us, pawed some sand, snorted, then, apparently thinking better of it, trotted on across the river. He was a huge animal, definitely not a water buffalo, so big that, as he crossed the river, the water barely came above his knees. I have since learned that there is a relatively rare bull of this size and description in Asia.

For three more days, we walked along the river, in and out of the water, occasionally disturbing wild water buffalo and seeing crocodile tracks, but not encountering any crocodiles. During the cool nights, we were comfortable in our fleece-lined suits and were generally able to make a good fire with the plentiful driftwood.

By the third day, large water blisters formed on the soles of my feet due to walking in the constantly soaked flight boots. Pai and Hsu wore cheap rubber-soled oxfords, which held up beautifully and gave them no trouble. On the fourth day, we met a group of natives who were heading upriver and engaged one of them to guide us to the nearest town. This proved to be Sorbhog. We also learned that the two rivers emerging from the Tibetan mountain range were the Manas and the Mora Manas. This, incidentally, is the general area

where the Chinese Communists invaded India several years ago.

By the last day, my blisters were so painful that I had to rest every hundred yards or so, but fortunately we came to a road and were picked up by some British officers in a station wagon. At about the same time, a CNAC plane which had been searching for us made a low pass, recognized us, and landed in the Sorbhog airfield, which had not been activated. The British gave us water, but offered our rescuers Scotch; then turned us over to a GI railroad detachment that was running the local railroad. Shortly thereafter, we were picked up by the CNAC crew and flown to Dinjan.

Pai and Hsu proved to be excellent companions for this caper. They were good-natured, ingenious and hard-working. They spoke enough English to make our evenings around the camp fire pleasant and interesting. We boiled all of our drinking water in our canteen. Each man lived on one K ration a day, normally one meal; yet we never felt particularly hungry. Except for my blistered feet and a profound thirst, we finished the adventure in excellent condition. Pai and Hsu later threw a huge Chinese dinner in Calcutta, which took care of the latter problem.

GLENN CARROLL'S C-47 FLIES AGAIN!

By William C. McDonald, Jr.

The men behind the scenes rarely get credit for a job well done. So I want to tell the story of how Art Prendergast, one of our leading mechanics, and his fine Chinese maintenance crew salvaged the C-47 which Glenn Carroll had abandoned.

The day after we located Captain Carroll's ditched ship in the Manas River, about a mile south of the Himalayas, Art

and his crew were on their way to the site of the ditching to see whether the plane could be refitted for service or should be written off as a loss. To reach the stranded No. 81, Art and his crew had to walk to the head of the Manas River about a mile upstream from the C-47. Then they used rubber rafts to float downstream to the small island in the river where the ship had been left. On one of these trips downstream a Chinese mechanic fell out of the flimsy, bobbing raft and, before he could be hauled back into the boat, was attacked and devoured by a 25-foot crocodile.

A survey showed that the left propeller and engine of Number 81 were damaged and would have to be replaced. This was impossible, however, on the small island where the plane had been abandoned. Accordingly, Art's first step was to hire local labor and elephants to drag the C-47, with its landing gear down, onto a dry overflow bed where repairs could be made.

Barely a month after Carroll had made his nighttime ditching, Art Prendergast sent word to Calcutta that all necessary repairs had been made, the engines had been tested, and the plane was ready to be flown out of the jungle.

Captain C. L. Sharp, our Operations Manager, asked me if I would do the job and I replied affirmatively. Accordingly, I was flown into Sorbhog on the Brahmaputra River and then driven in a jeep almost to the head of the Manas River. There I took a life raft on the same turbulent river route which had claimed the life of our Chinese mechanic down to where the plane was waiting.

Art was there to meet me and gave me a warm welcome. We inspected the C-47 and he told me about the repairs he had made. We then looked at the emergency take-off strip which had been prepared for the flight out. Rocks and

boulders about the size of basket balls lined the dry river bed. On pacing the improvised runway, we found it was only 150 feet long. Moreover, there was a three-foot bank of sand at the end of our take-off area. I asked Art to have the bank smoothed out and tilted with a 10 degree upsweep so we could be catapulted aloft. This seemed to me absolutely necessary because the Manas River was dead ahead, a mere fifteen feet beyond the sand slope.

Art had put only 50 gallons of gas in a main tank to minimize take-off weight. A Chinese mechanic, who was very sick wanted to fly back with us so he could receive medical attention. It was difficult to refuse his request. After Art and I were in the cockpit the other mechanics smuggled the sick mechanic aboard and shut the door. Fortunately, his extra weight did not jeopardize our take-off.

We made our routine checks very carefully. Then came the time of decision. We ran the engines up, gave the O.K. signal, and opened the throttles wide. The first fifty feet of the take-off seemed to last an eternity, but at a hundred feet our Tail lightened and rose a little. Just as we reached the upslope of the sand, I pulled firmly, but not too hard, on the wheel and we catapulted into the air. I let old No. 81 settle toward the water and Art raised the landing gear. We had used 10 degrees of flap and, just before touching the water, I realized we had her under control. Slowly we began to climb and at a hundred feet we milked the flaps up and knew we were home free. C-47 Number 81 was back in the air and would soon be on the job again carrying cargo over the Hump.

Captain Carroll, co-pilot Pai and Radio Operator Hsu are to be congratulated for their fine flying teamwork in getting No. 81 down safely. Art Prendergast and his Chinese

maintenance crew did an outstanding job of salvage. Moreover, Art showed a great deal of courage when he volunteered to fly as my co-pilot on a never-to-be-forgotten take-off from the banks of the crocodile infested Manas River.

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