RAF COLLEGE CRANWELL
College Journal Extracts

Spring & Autumn 1933

Spring 1933 - Our Fourth Commandant

AIR VICE-MARSHAL A. M. LONGMORE.

Spring 1933 - Prize Winners

[*Photo : Gale & Polden, Ltd.*

PRIZE-WINNERS, CHRISTMAS, 1932.

Standing.—F./C. Cpl. D. S. Kite (English). F./C. Cpl. R. G. Stone (Science). F./C. J. C. Pope (Engineering and Service Subjects).

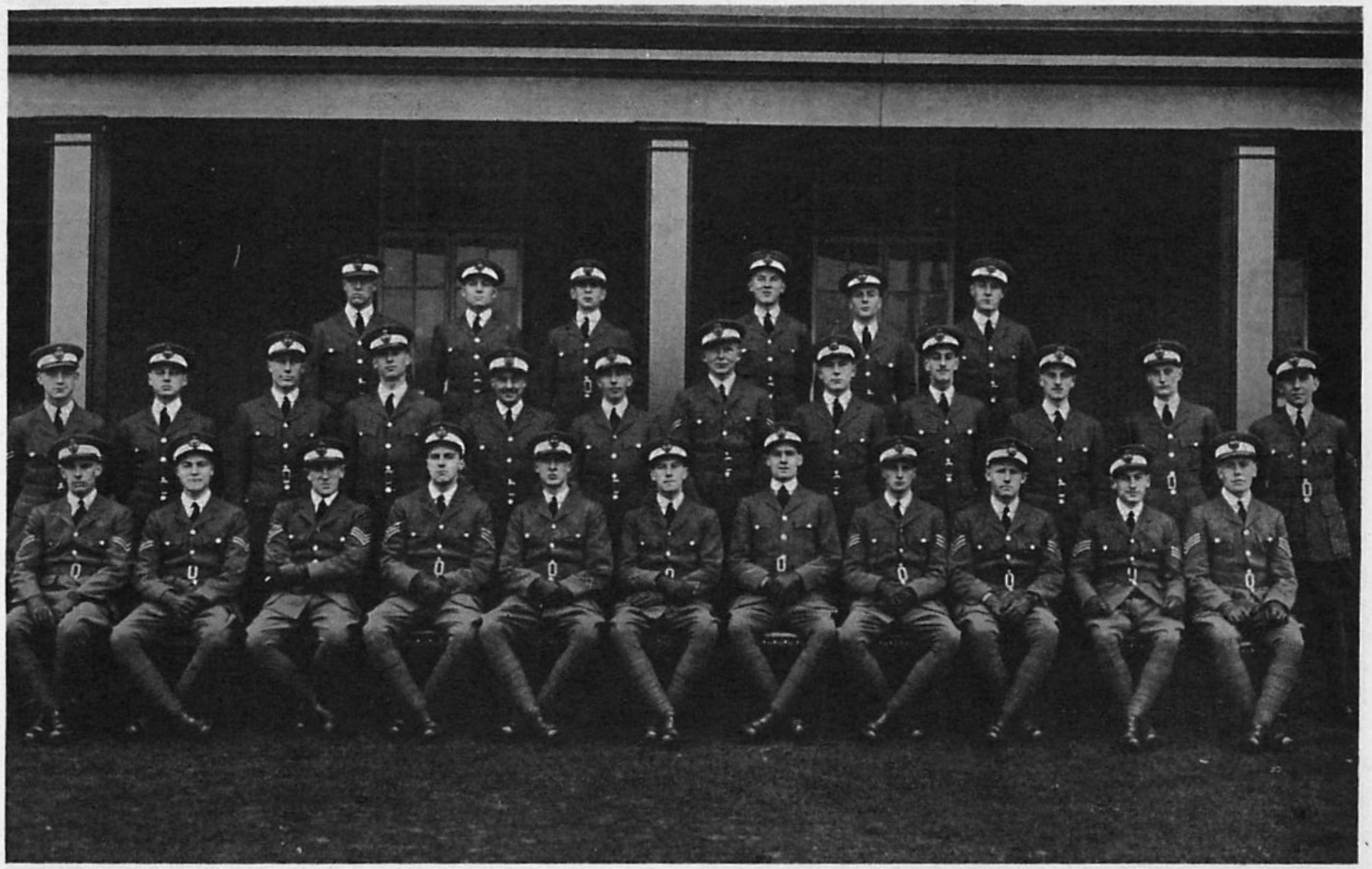
Seated.—F./C. Under-Officer R. V. Rolph (Sword of Honour). F./C. Sergt. E. B. C. Davies (Flying).

Spring 1933 - Staff

THE HOUSEHOLD STAFF, 1932.

[*Photo: Cpl. G. Roberts.*

Spring 1933 - Graduation Photo



[*Photo: Gale & Polden, Ltd.*

THE PASSING-OUT TERM, CHRISTMAS, 1932.

Back Row.—F./C. R. L. Bradford, F./C. R. G. Coventry, F./C. A. N. Bray, F./C. R. Talbot-Smith, F./C. D. A. Pemberton, F./C. J. C. Pope.

Second Row.—F./C. Cpl. M. K. D. Porter, F./C. D. H. Furze, F./C. P. R. Robinson, F./C. R. J. Knights-Whittome, F./C. M. J. O. Parish, F./C. L. Coulson, F./C. Cpl. P. S. Salter, F./C. A. G. Powell, F./C. P. de G. H. Seymour, F./C. I. G. Mackay, F./C. Cpl. M. Hastings, F./C. Cpl. P. J. Pearson-Rogers.

Front Row.—F./C. Cpl. R. G. Stone, F./C. Cpl. A. R. G. Bax, F./C. A./Sergt. A. Golding, F./C. Sergt. R. A. C. Barclay, F./C. U./O. W. R. Brotherhood, F./C. U./O. R. V. Rolph, F./C. U./O. E. D. M. Nelson, F./C. Sergt. J. F. H. Du Boulay, F./C. Sergt. E. B. C. Davies, F./C. A./Sergt. D. S. Kite, F./C. A./Sergt. S. P. A. Patmore.

Autumn 1933 - Pioneering Flight (1)

THE MOUNT EVEREST FLIGHT

By Colonel L. V. S. Blacker.

The flight started from the Lalbalu landing ground, ten miles east of Purnea, at 8.20 a.m. on April 3rd, the Houston-Westland aeroplane leading, piloted by Lord Clydesdale, with myself as the observer, and followed by the Westland-Wallace, piloted by F./Lieut. McIntyre, with Mr. Bonnett, of the Gaumont-British Picture Corporation, as cinematographer.

Before the two Westlands took off, Air Commodore Fellowes made a preliminary flight in a light aeroplane to an altitude of 17,000 feet, and reported the course to be free from clouds as far as could be seen from south of the Nepal border.

The meteorological station reported the wind to be 57 m.p.h. at 33,000 feet, which was the working height for our survey photography. This was greater than we contemplated; and it seemed possible that we might be compelled to land at Forbesganj on our return should there not be sufficient fuel left for the full distance. The Forbesganj landing ground had been prepared and fuel had been placed there.

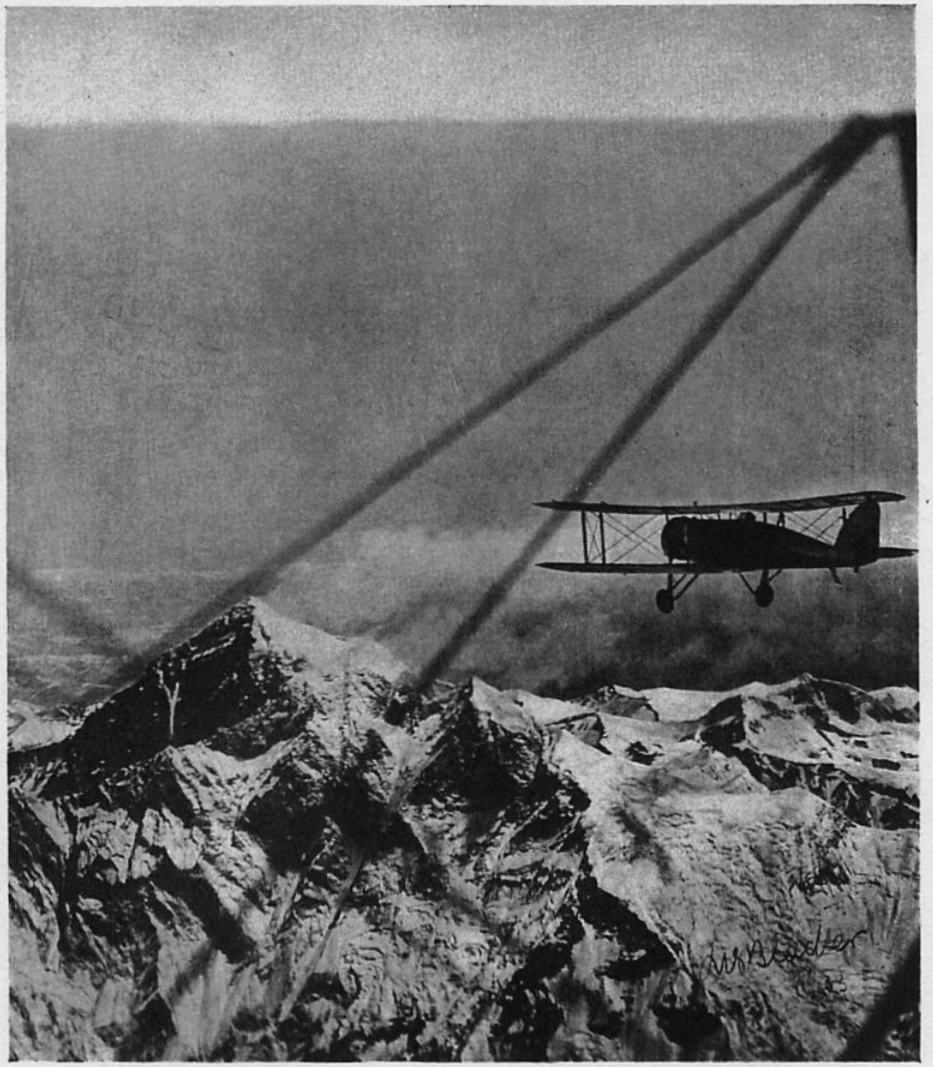
Each aeroplane carried an electrically heated automatic Eagle 3 survey camera, operated by the pilot, the electrical control switchbox being in his cockpit. The observer's task with these cameras was to adjust the angle of drift after measuring it on the drift-sight, and to change the film magazine when the spool came to an end.

The other cameras, still and motion picture—numbering six in all, were worked by the observers. Each had a P.14 5-inch camera for oblique photography with plates; the Houston-Westland also carried a Newman ciné camera with spare spools and a pistol camera for $3\frac{1}{2}$ by $2\frac{1}{2}$ plates; the Westland-Wallace was equipped with two of the Newman ciné cameras which all took standard films.

The machines flew in company on a bearing of 342°, climbing steadily and crossing the Nepal frontier near Jogbani at 13,000 feet. There was no incident except a minor electrical trouble in the Houston-Westland which the observer rectified.

The machines then climbed to position about 30,000 feet over a ridge immediately west of the confluence of the Sangkhua Khola with the Arun River. This was on the direct course and was the southern ground control for air survey.

The survey cameras were switched on just before we reached this, so as to commence taking a continuous series of strip of overlapping photographs of the summit of Mount Everest, which, as a trigonometrical point, was to have been the northern ground control. Unfortunately, the dense dust-haze had been carried up to a height of 19,000 feet. This had the effect of obscuring the ground where the survey film should have started. Thus we approached the mountain at a height of about 32,000 feet, and both observers worked energetically with their oblique and ciné cameras, for which stupendous and magnificent views presented themselves.



OVER EVEREST. [*The Times, Copyright.*

Autumn 1933 - Pioneering Flight (2)

By now the Wallace was out of sight; and the Houston, approaching the Lhotse Peak, met a powerful down-draught which caused a loss of height. This for a moment made it doubtful whether the aeroplane would clear the summit of Mount Everest, now immediately in front of it. However, the immense power of the Pegasus engine was sufficient to carry the aircraft over it, though it seemed only by the narrowest margin. Then again over the crest of Everest another great downward current of wind seized the aircraft and threatened to pull it violently downwards to the north. The pilot had turned his machine to the west, and for a moment, battling against the force of the westerly wind, combined with the downward pull of the air eddies, our machine appeared to make no headway whatever despite its speed of 120 miles an hour. Gradually, however, it progressed westward, and then turned again, allowing the observer to photograph the summits of Everest and Makalu. We exposed a great number of plates and films.

Still the Wallace was not in sight, but the report of its progress is in the main identical with that of ours. The observer in this machine had the misfortune to damage his oxygen pipe at this height, and this caused him pain and some unconsciousness. By an effort he contrived to bind a handkerchief round the crack and to remain at his duties.

The return flight, about parallel to the Arun Valley on its southern side, was uneventful and the machines, having still a good margin of fuel in their tanks, returned safely to Lalbalu without landing at Forbesganj.

The oxygen was more than adequate in quantity and of irreproachable quality. This is explained by the fact that there was not a symptom of freezing. Similarly, the electrical heating devices for our goggles, clothing, gloves, boots, cameras and spare films functioned almost without a hitch. The double flight lasted three hours ten minutes.

The photographic results were, with the exception of both survey films, satisfactory. These, on account of the dust-haze, were incomplete and disconnected and therefore almost valueless. The survey being the main object of the flight, we made an application to the Maharajah of Nepal for his permission to carry out a second flight; this he was good enough to sanction.

The start of this second flight was delayed by the weather as well as by difficulties connected with the reinsurance of the machines.

However, the weather was favourable on the morning of April 19th. The machines took off as before from Lalbalu at 7.50 a.m., but the procedure on the outward flight was different. The wind velocity at 32,000 feet was estimated by the meteorologists as nearly 120 miles per hour. Hence both machines flew to a point affording about a hundred miles of westing, viz., at a low height where the wind was not strong. Then, climbing steeply, they turned towards Mount Everest on a course north-east, so that the strong wind was no longer adverse. It was not until the machines had reached 18,000 feet that it was decided to proceed with the flight, since the country was covered with a dense layer of cumulus. However, on reaching 18,000 feet, it could be seen that the southern and south-western slopes of Mount Everest, being those which we desired to survey, were clear and above the clouds. There were some good opportunities of taking oblique films mainly of the south-western aspects. The current for driving the survey camera in the Houston was barely sufficient on account of the many demands on it, so that the observer was compelled to crouch over the camera and turn the actuating knob by hand every twenty seconds, *i.e.*, when exposure was due at its predetermined interval, in order to make sure of results. Hence only about fifteen seconds were left between each in which he had to load and set his other cameras and take exposures. We had no intention on this occasion to fly over the summit of Mount Everest. This had already been achieved and better scientific results were to be obtained by photographing the southern and western declivities and taking survey strips of the country adjoining the Khumbu Glacier and towards Makalu on the south side.

This we did with good results, and obtained two complete strips of overlapping photographs. Our return flight on a bearing of 200° from Makalu was uneventful, sufficient fuel remaining for our return to Lalbalu.

The two spools we developed at once and owing to the fine light they showed detail and quality.

It is our opinion that this flight has demonstrated the practicability of taking continuous strips of air-survey photography at great altitudes over mountains and glaciers otherwise inaccessible. The difficulties we encountered were mainly those of weather, not so much wind force as cloudy conditions, and to the phenomenal haze in the cameras.

We hope that when these unique films come to be plotted the scientific and geographical world will realize the debt it owes to the vision and progressive spirit of the Maharajah of Nepal.

MR. GREEN
('Air Mechanic).

Autumn 1933 - Lead Article (1)

PARACHUTING AS A CAREER

By John Tranum.

I began parachuting from necessity. About thirteen years ago I went from my native land to America to find a career in aviation. Fortune soon favoured me and one day I was flying over the beautiful Santé Barbara Mountains, feeling very pleased with myself. Suddenly I heard a sizzling sound, followed at once by the unpleasant sight of a billow of smoke and flame issuing from my engine.

I thought that I was doomed until I realized that I had got a parachute with me; in fact, the object of the flight was to convey this parachute to a pilot at Santé Barbara field. In a second I jumped out and landed safely, amazed by the experience. I had imagined dropping through the air as a terrible experience, but it was quite pleasant.

From that moment I decided to become a parachutist, and as soon as I could afford the equipment I looked round to make a living from it. I went to a film studio and offered my services for any air stunt that they liked to name.

The casting director said that he wanted an aeroplane taken up, fired, and the pilot to escape by parachute. I asked five hundred dollars for the feat, and after he got over his surprise we came to terms. The aeroplane —an old Nieuport—was well sprayed with petrol and I took it up to 7,000 feet. Here I released my safety belt and set fire to the plane with a special fuse match.

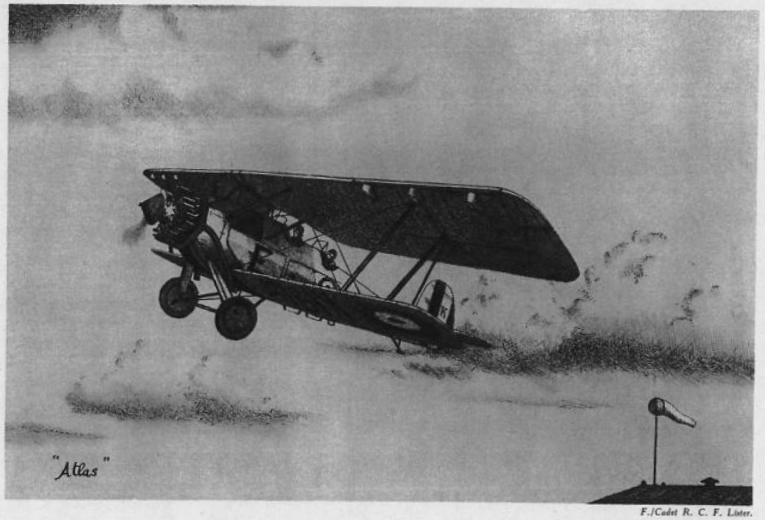
Contrary to expectations, there was a loud " whoof " followed by a brilliant firework display, which showered me with burning drops of petrol. I got out and dropped and the roaring Nieuport came after me, but I managed to miss it and bring my first film job to a happy ending.

After that I was never short of film work, which varied from serious jumps to the grotesque. For example, to advertise a new summer resort I had to jump dressed in a frock-coat, grey topper and monocle, and land on the lawn of a principal hotel, then make a majestic entry into the foyer, with my parachute stowed away in my suitcase.

I also came down once on a beach dressed in white flannels with a string of beads round my neck, playing on a guitar—all for the purpose of advertising an Hawaiian orchestra. I have never believed in attempting foolhardy stunts with parachutes, but it is difficult to live up to ideals when one's living is involved. Big fees have been responsible for some of my aerial excesses.

Perhaps the silliest thing I did was to ride a motor-cycle over a Californian cliff 200 feet deep, which is a short distance for operating a parachute effectively. Three of my predecessors had lost their lives over the feat. But somehow I came through safely, although it was an ordeal.

I have often wanted to drop off the Eiffel Tower in Paris, and one day I had taken up a position ready to jump from there, but as I stepped forward



F./Cadet R. C. F. Lister.

My velocity at that moment was 119 m.p.h., the maximum velocity of a falling body when it enters the vertical path, but during my dive my velocity had touched 140 m.p.h.

It is difficult to describe the shock of opening which I felt. One's body seemed to be mangled, but that feeling only lasted a second and I was soon comfortably floating down to earth. I landed safely close to a tree about five miles from the aerodrome, where I sat for a few minutes recovering from slight exhaustion or the reaction.

The observers of the drop proved my fall to be 17,250 feet and not 17,500 feet as I thought, but I could safely have continued for another thousand. However, I was sufficiently beyond the record so I remain contented.

There is a usefulness in a drop of this nature. First it proves that an airman can rely upon his parachute to withstand the shock after he has fallen a long distance. Secondly, it proves that he can have faith in himself to withstand such a drop without losing consciousness or being otherwise rendered incapable of opening his parachute.

In war the fighting pilot inevitably will be faced with the contingency of jumping for his life at great altitudes, so I can suggest that such a jump as mine is a comforting lesson.

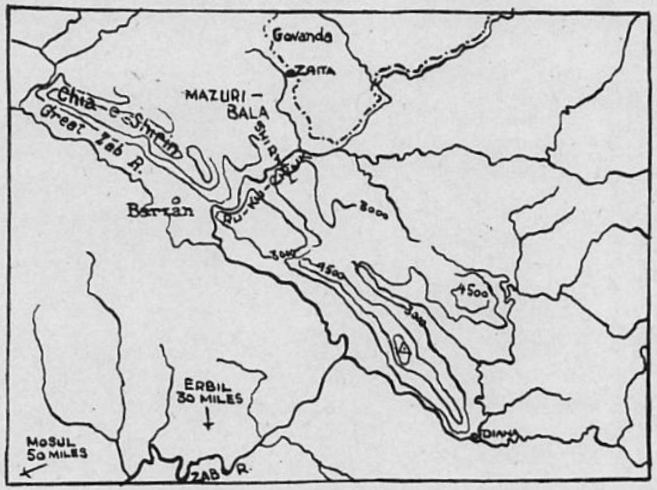
As for the parachute, the type I used is designed to bear a shock load of 200 lb. moving at any speed up to 400 miles per hour. The rest of its performance will be known to my readers. It opens in 1 3-5th seconds, and one descends at the rate of 21 feet per second.

Autumn 1933 - Overseas Operation (1)

OPERATIONS IN THE BARZAN COUNTRY (IRAQ) MARCH—JUNE, 1932

By Flight-Lieutenant G. Combe.

The Barzan country is part of Northern Kurdistan and is about 60 miles north-east of Mosul. It is a mountainous region cut by many deep ravines and gorges, through which flow fast mountain streams. In the winter the mountains are covered with snow. There are many large caves, and scrub oak abounds. The country resembles Waziristan, in the North-West Frontier Province of India.



The inhabitants are Kurds, who are of small physique compared with the Mahsud, but have the same characteristics. The Kurd is hardy, a determined and fearless fighter, and a good shot. He is skilled in mountain warfare, and is quick to take advantage of an enemy off his guard. Handicapped by poverty, lack of food and ammunition he lives largely by raiding and looting. His main fault is treachery.

The operations were begun by the Iraqi Government to extend their control in this area. Sheik Ahmed and his followers, who numbered about 500 fighting men, had defied the Iraqi Government for some time, and in March, 1932, it was decided to send up an Iraqi column of all arms. The month of March was chosen because the snow has usually disappeared from the valleys by then; this makes it possible for the army to move. It was most important that this operation should be carried through as quickly as possible in order that police posts and roads should be constructed before the winter.

The general plan of operations was to send up an Iraqi Army column to penetrate the eastern end of Sheikh Ahmed's territory. The advance of this column was to be deliberate and was to be accompanied by the construction of a road and the establishment of police posts. The Iraqi Air Force was to co-operate with the column and thus to receive its first experience of active operations.

It was decided that 30 (B) Squadron, Royal Air Force, Mosul, should also provide close co-operation with the troops, and, in order to be near the scene of operations, one Flight was moved to Diana, the other two Flights remaining at Mosul in reserve.

Shortly after the start of hostilities it was realized that the Iraqi Army and Air Force were against a tougher problem than they had anticipated. Heavy rain and a difficult terrain made the advance of the army slow and tedious. The " Moth " aircraft, with which the Iraqi Air Force was equipped proved to be unsuitable for mountainous country and so the bulk of the co-operation work fell on the Wapitis. The Kurds succeeded in seriously impeding the column (known as " Daycol ") and at the beginning of April R.A.F. aircraft saved an awkward situation by prompt offensive action. This was when the bulk of the hired transport of the column was some distance behind the main body and only lightly guarded. The Kurds got amongst the transport and stampeded the mules, the drivers cutting their loads and riding away. Had it not been for the presence of R.A.F. aircraft the Iraqi Army would have been in grave danger as a result of losing all its supplies. After this episode " Daycol " ceased to be a serious active force for a long time.

Meanwhile a second column from the south had reached Billeh, about four miles south of Barzan, without opposition, and had established a camp there. Air and ground reconnaissance showed that Barzan was deserted and undefended, and that only a few small bands of Kurds were on the south side of the natural barrier of the Chia-e-Shirin range, about 6,000 feet in height.

Towards the end of April it was clear that the Iraqi Army and Air Force alone could not finish off the campaign, however much close co-operation was given by the R.A.F. All that had been done during the first six weeks was that the main column of the Iraqi Army had occupied about one half of the Shirwan area, while a second column (named Bazcol) had occupied Barzan village. Moreover, the Chia-e-Shirin imposed a barrier quite impassable for any troops between Bazcol and the heart of Sheikh Ahmed's country to the north-east.

The position now was that as long as an enemy force of even 100 men remained in Mazuri Bala (the area of Sheik Ahmed's territory enclosed by the Ru-Ku-Chuk and the Chia-e-Shirin) the operations could not be considered as successful. Only if there was no great opposition could the army cross the Chia-e-Shirin and Ru-Ku-Chuk; and only if they surmounted these could they hope to deal with Mazuri Bala. Even if this

Autumn 1933 - Overseas Operation (2)

area was entered the country is extremely mountainous and the lines of communication of the column would be vulnerable.

After a careful and exhaustive examination of the problem it was decided that there was no way of establishing control in the Mazuri Bala area comprising the heart of Sheikh Ahmed's territory except by means of air operations. The Iraqi Army could do no more than consolidate its position in the Shirwan area on the south-eastern side of the Ru-Ku-Chuk. It was necessary to deal with the area north-west of the Ru-Ku-Chuk by means of air control.

The present article is confined to the work of the R.A.F. in co-operation with the Iraqi Army columns, Daycol and Bazcol.

Communication between aircraft and the ground was made by a simple ground code, by message dropping, and by message picking up. R.A.F. W/T Stations for point-to-point communication on the ground were maintained permanently at Billeh and Diana, and a R.A.F. liaison officer, with a R.A.F. W/T pack set, accompanied each column.

Mountain warfare is slow and tedious, and it is easy to keep in view from the air the situation on the ground. So our aircraft had a small area to watch. The Kurd is an expert at concealment and he blends with the ground. He soon learnt to keep still when aircraft were above him. On the other hand he possessed no anti-aircraft weapons except his rifle, and ammunition which is difficult for him to get. So aircraft were fairly safe in coming down low, although aircraft on many occasions and flying personnel on one or two occasions were hit by rifle fire.

The reliance that the Iraqi soldier placed on the aircraft was the outstanding feature of the co-operation. Aircraft saved the situation at the beginning of April, when a party of Kurds got amongst Daycol's supply column, and from then until the end of the operations the Iraqi Army was reluctant to move without supporting aircraft.

Supply dropping of all kinds was carried out from time to time throughout the operations, although this is not normally an economical use of aircraft. On several occasions critical situations were saved by supply-dropping aircraft.

The casualties inflicted by aircraft upon the hostile tribesmen when Daycol got into difficulties at the beginning of April made such an impression upon the Kurds that an attack in the presence of aircraft was never attempted again. It is worth noting that from this time onwards the Iraqi Army never lost a man through enemy action when aircraft were co-operating. This in itself shows the respect the Kurd had for aircraft.

As with all frontier tribes there was always a shortage of ammunition. Before the commencement of operations the Kurds undoubtedly thought that raids on the supply columns would keep them supplied with ammunition. The fact that so few shots were fired at aircraft after the middle of April is a testimony to the fact that there was a constant shortage.

It proved to be essential to have an R.A.F. liaison officer with each column, especially as the army was inexperienced in the ways of aircraft. Without an R.A.F. officer frequent mistakes occur, the results of which may have serious consequences. The duties of this officer are to advise the Column Commander regarding the support which he may expect to receive from the air, to inform the co-operating aircraft of the Column Commander's plans for each day and of the air support which he would like to receive, and to transmit intelligence reports and situation reports to Air Headquarters each evening.

[*With the aid of Group-Captain* A. G. R. GARROD, *the Editor proposes to continue the discussion of this campaign in the next issue of the Journal.*]

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TROOPS CROSSING THE RU-KU-CHUK INTO MAZURI BALA.

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RU-KU-CHUK GORGE.

Autumn 1933 - Graduation Photos

[*Photo: Gale & Polden, Ltd.*

PRIZE WINNERS—SUMMER, 1933.

F./C. Cpl. B. H. Becker. F./C. Cpl. R. R. Fairweather.
F./C. U.O. J. V. C. Badger. F./C. A. M. Engineer.

[*Photo: Gale & Polden, Ltd.*

THE PASSING-OUT TERM—SUMMER, 1933.

Back Row.—F./C. Cpl. P. L. Donkin. F./C. A. H. Jarand. F./C. M. A. Aylmer. F./C. Cpl. C. T. Weir. F./C. H. R. Tidd. F./C. R. G. Watson. F./C. Cpl. A. C. P. Carver. F./C. N. C. Jones. F./C. M. D. Thunder.
2nd Row.—F./C. Cpl. B. H. Becker. F./C. D. H. Spencer. F./C. A. D. Ferguson. F./C. M. F. B. Read. F./C. K. Gray. F./C. G. A. V. Knyvett. F./C. Cpl. A. F. R. Bennett. F./C. C. F. Pearce. F./C. A. M. Engineer. F./C. C. N. Hancock. F./C. B. Murray.
Sitting.—F./C. A./Sgt. B. A. Chacksfield. F./C. A./Sgt. T. L. Moseley. F./C. Sgt. W. D. Disbrey. F./C. U.O. L. G. Levis. F./C. U.O. J. V. C. Badger. F./C. U.O. J. A. Hotham. F./C. Sgt. P. W. Bale. F./C. Sgt. I. H. D. Walker. F./C. A./Sgt. D. Finlay.
On Ground.—F./C. Cpl. R. R. Fairweather. F./C. K. A. Stewart. F./C. G. E. Peacock. F./C. J. A. P. Owen.