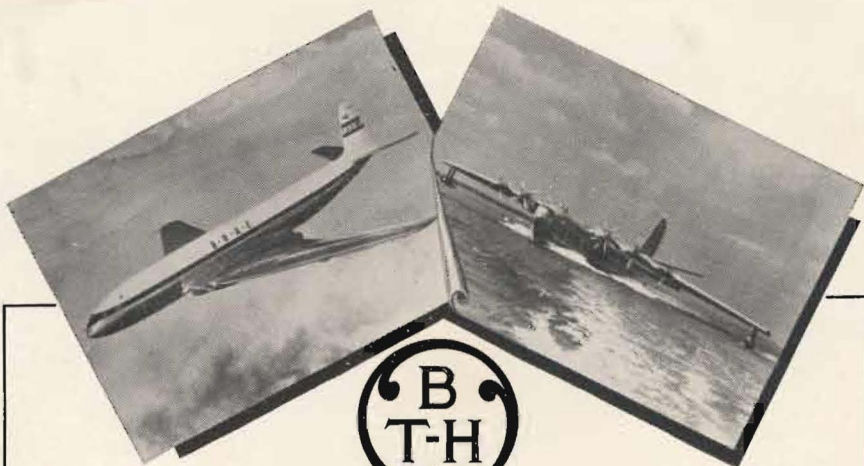


AUSTER NEWS

Published by AUSTER AIRCRAFT Limited
REARSBY AERODROME · LEICESTER · ENGLAND



Vol. 4 : No. 9



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THE S.B.A.C. SHOW

ONCE AGAIN AND QUICKLY it seems the S.B.A.C. show has been staged at Farnborough. From all over the world visitors flocked to see the most varied selection of aircraft put through their respective paces. Diversity of purpose was the most prominent feature when the whole of the participating aircraft were viewed collectively. Ranging from the new type "utility" Short Seamen to the luxury Bristol Britannia air liner, the aircraft on show reflected the year's achievement of the British aircraft industry.

A unique opportunity is provided at Farnborough; this is the ease with which both the largest and smallest, and the fastest and slowest types can be compared and their various merits summed up.

To prove that the industry does more than provide prototypes and "one offs" it is interesting to record that during 1952 aircraft exports from Britain totalled some £42,000,000, not including jet airliners ordered abroad. These alone will account for a further £75,000,000 without spares.

Our own contribution to this splendid effort has been steady export of Aiglet Trainers, Autocars, Mk. 6 A.O.P.'s and spraying aircraft to countries the world over where there is a demand for a cheap and reliable light plane.

At Farnborough, we demonstrated our Aiglet Trainer, and according to press reports it proved to be one of the most popular and spectacular items in the show. Reviewing the show as a whole, one thing is certain, that world interest will always serve to spur on the industry to even greater efforts next year.

* * *

A photograph taken of the Aiglet Trainer demonstrating at the S.B.A.C. Show will be included in the next issue of the *Auster News*.

* * *

The Front Cover

AN AUSTER A.O.P. 6 No. 1913 Light Liaison Flight R.A.F., leaves an advanced Korean landing strip for a sortie over the front line. (See article on page 2).

The Sharp End

By H. F. KING, M.B.E.

The signing of an armistice in Korea conveniently coincides with the publication recently of the activities of two Auster equipped A.O.P. Flights operating over the front line. Extracts from the article are reproduced below by the kind permission of "Flight." The excellent photographs were taken by Mr. L. W. MacLaren.

MY MORNING up-front was a full and memorable one, for before lunch I had visited, and flown with, No. 1913 Light Liaison Flight and No. 1903 Independent Air O.P. Flight, Royal Air Force. These are the only R.A.F. units serving in Korea, and though little is heard of them at home (more's the pity), "The Flights" have earned a splendid reputation throughout the Far East for their services to the Commonwealth and to the American Army, in difficult and dangerous circumstances.

No. 1913 was formed at the Light Aircraft School, R.A.F. Middle Wallop, in June, 1951, under the command of Capt. P. A. Downward, of the Glider Pilot Regiment, and by a stroke of luck I reached it in Korea the day before Capt. Downward handed over.

Though a Royal Air Force unit, the Flight (in common with other Auster units operating with the Army) is supplied with pilots, and with various other personnel, by the army: so at Middle Wallop the ancillary Army tradesmen were initiated into airscrew swinging, picketing and marshalling of the Austers. Thence the Flight was transferred to North Wales for training under "Korean conditions" (Wild Wales indeed!) and in late August embarked for Japan.

The Austers were assembled at

Iwakuni and delivered to Korea, where the men dug in, pitched their tents and erected a staff for the R.A.F. ensign. The winter was extremely cold and maintenance a sore trial. Prop-swinging was made hazardous by the ice, and at the close of each day covers had to be placed on the Austers and flameless heaters positioned under their Gipsy Major engines. Major-General Cassels, the G.O.C. No. 1 Commonwealth Division and U.S. Generals Ridgway and Van Fleet were frequent visitors to the strip, and the Flight established a reputation for dependability and adaptability. Thus, when it was decided to employ the Austers on reconnaissance, rear observers were recruited from within the Flight itself.

Other than Capt. Downward (his regiment is the South Lances, and he was awarded the D.F.C. during his Korean service), the "old sweats" are Capt. P. F. Wilson (now in command), and Staff-Sergeants Hall and Rolley. Capt. Downward completed 201 sorties over the front line between November, 1951, and January, 1952, and has had his fair share of narrow operational squeaks. Capt. Wilson (The Buffs) has also had his ration of excitement over the lines, but, strangely enough, he was most nearly prevented from ever taking over the Flight by a "friendly" T-6 which, having been shot up, made for the Auster strip. The



Officers of No. 1903 Independent Air O.P. (l. to r.) Capt. P. J. A. Tees, R.C.H.A., Capt. Perkins, R.A., Capt. R. S. Deacon, R.A.A., Capt. G. W. C. Joyce, R.A.

pilot's vision being obscured by oil, he bounced the T-6 heavily into a ditch, where it shed its undercarriage. Wheel-less, it then set about chasing Capt. Wilson, duly caught him and sent him somersaulting into a paddy-field. Members of the Flight extricated him under the fire of R.P.'s from the now-flaming aircraft, and, the tanks having failed to explode, the pilot and observer escaped uninjured. Capt. Wilson was less lucky, but seemed none the worse when we talked to him the other week.

Capt. H. Irwin, D.F.C. (Royal West Kents), is an ex-fighter pilot, R.A.F., and Staff-Sergeants Hall and Rolley are both war-time glider pilots: "Staff" Hall did glider ops. on D-day, at Arnhem and on the Rhine, and Rolley, with nine years in the Glider Pilot Regiment behind him, had extensive Hamilcar experience. Sergeant J. Hutchings, D.F.M. is regarded as "the General's pilot," being responsible for flying

Major-General A. R. West, G.O.C. No. 1 Commonwealth Division.

Sergeant Jermy is credited with the "Nearest miss" to date: his Auster was turned upside-down by a 37 mm. burst—without apparent damage.

No. 1913 Flight is mainly engaged in visual-reconnaissance and communication flying. Reconnaissance over the lines may be undertaken with or without a passenger; and if one is carried he may be a senior officer, a patrol commander familiarizing himself with the ground, or a mortar-platoon officer or sergeant supervising a shoot with a battalion's 3-in. mortars. Occasionally a low-level sortie in search of missing patrol members may be called for and this may entail penetration behind enemy positions.

The Army commanders use the Flight as an accurate and fast means of reconnaissance in forward and rear areas, and for the Engineers it can do an especially useful job.

For instance, the Austers may fly down divisional roads to ascertain where repairs or flood clearance is needed, or to seek good timber for dug-out props.

When the Flight first began operations in Korea sorties of 3-4 miles over enemy territory were fairly common; but with the accretion of light A.A. during the past six or eight months such flying has been limited to "essential occasions." Sightings have, in any case, steadily

radio frequency to that of the gunners, they can "do a shoot" with them, using a simplified technique. Alternatively, they may call the A.O.P. Flight and ask an Auster to look in on a given map reference.

Usually, when over the lines, the Austers fly above small-arms range, though often within range of 20 mm. and 37 mm. fire, a certain amount of which has been forthcoming, as we shall later confirm. A control vehicle informs the pilot of friendly



An Auster A.O.P.6 of No. 1903 Independent Air O.P. Flight, R.A.F., over the lines. Enemy trenches and strong-points may be made out among the shell and bomb craters.

decreased, for not only have the enemy day-time movements been reduced almost to vanishing point, but camouflage has improved and the enemy is reluctant to betray his positions in any way for fear of air strikes.

Though the flight works primarily with infantry, it does not fail to put the artillery on to "opportunity" targets, *e.g.* concentrations of men or active supply points. To this end the pilots undergo a short artillery course so that, by changing their

artillery activity, but he must work out for himself those unhealthy areas where the trajectories of the shells will correspond with the Auster's flight path. Through his binoculars he may see groups of perhaps 40 or 50 of the enemy who, having moved up before first light, may be laying in a "concealed" area ready for an evening attack on our positions. He will note the useage of roads, supply points, any new diggings, field works, and active guns or mortars; and once the Flight

was asked to keep tally on an expanding Chinese graveyard. The score reached over a hundred.

Generally the pilot will fly with one ear uncovered so that he may hear the crack of passing bullets.

Capt. Downward told me how the terrain varies with the seasons. In the winter snows, the tracks of vehicles can be easily picked up; in the spring, greenery and foliage give natural camouflage; and towards the end of summer, when the natural colour is turning to brown, the artificial camouflage can often be picked out.

Communication flying is now the Flight's heaviest commitment, and for such work in the rear areas V.H.F. is fitted to the Austers so that the pilots can work American frequencies. One Auster 7 is engaged solely on communication flying, for which task it is superior to the Mk. 6.

Each month the Flight issues a confidential resumé of its activities, from a few of which I am privileged to quote. Thus, of last winter—"The strip has now become fairly well hard-baked and normally dries off quickly with the high day temperatures. The first heavy rain of the season caused quite a startling change, which literally happened overnight. The whole of the countryside changed colour from the drab brown and grey to a very fresh green which was soon mixed with the blazes of colour of the various blossoms." (Nor did it pass unnoticed that, under the pretext of erecting camouflage, Sgt. Killelea arranged a flower garden around the command post).

Of last December—"The month started with an extremely cold spell

which affected everyone from V.I.P. to airman alike." The V.I.P. was the President-elect, General Eisenhower, whose visit was kept so secret that the first the Flight knew of his presence was a host of light aircraft arriving on the strip during breakfast.

A bitter north-west wind at about that time hit the Flight severely. The biggest difficulty was getting the aircraft started and de-frosted, and the already urgent need for hot-air blower became a top priority, resulting in delivery the same day. Internal accumulators and trolley accs. suffered severe punishment owing to sluggish starting.

Having served in Malaya and Hong Kong, No. 1903 Independent Air O.P. Flight was sent to Korea in October, 1951, and ever since has operated in support of the Commonwealth Division. The Commanding Officer, Major J. M. H. Hailes, D.S.O., R.A., being temporarily absent, I was greeted by Capt. G. W. Joyce, D.F.C., R.A. (believe it or not, an ex-naval pilot). He told me that an Auster of the Flight was at the moment conducting a shoot of heavy American guns against enemy artillery and supply areas. The lighter 25-pounders of the Commonwealth Division, he explained, were generally used against troops and supply areas nearer the lines, and the speed with which they could be brought into action for close support or flak suppression was at once the pride of the gunners and the comfort of the troops and A.O.P. pilots.

The tasks of 1903 Flight, in conjunction with the artillery, were stated for me as counter bombardment (this



An Auster of 1903 Independent Air O.P. Flight in its revetment.

is the primary role), engagement of troops and supplies, observation of enemy defence improvements, photography of enemy features, and cover for minor and major offensives.

The Auster A.O.P. 6s have armour plate and the pilots fly solo, with parachutes. On a counter sortie the pilot observes and map-spots gun positions and engages any active guns with heavy American pieces. The enemy guns are usually in three or four pits, and hits by the American shells do extensive damage. Having returned from his sortie, the pilot marks an air photograph, which is forwarded to the counter-bombardment officer at H.Q. Royal Artillery. All briefing and shooting is done from air photographs. From time to time the targets thus "pre-ranged" are reconnoitred for improvements or activity. Should a pilot happen upon an opportune target, such as troops, in the course of one of these sorties, it is up to him to put the Commonwealth Division's 25-pounder on to them without delay.

Dusk sorties are flown in order to spot the flashes of enemy guns, and, if the light allows, the positions are forthwith engaged. A night landing is always incurred. A further responsibility which falls to the Flight in the event of a heavy attack by either side is the flying of dawn sorties to provide information and direct gunfire.

On a normal day the Austers fly about seven sorties, of which three may be operational, one a reconnaissance of the Division's front, and one an admin. flight. A typical operational summary would run: "Three counter-bombardment sorties successfully flown, two gun positions being destroyed and one damaged. Improvements noticed in diggings and bunker building. Eight separate groups of men and supplies effectively engaged." In a good month each pilot will put in 45-50 hours flying.

Most sorties are flown above 5,000 ft., out of consideration of light flak, which the Communists now

have well forward in some strength. It is necessary, in any case, to fly high in order to keep clear of the path of our own shells. Precautions notwithstanding, the Austers are frequently rocked by the shells, and one pilot who under-estimated the American "Long Toms" found himself on his back.

Occasional calls are paid on the American artillery fire-controllers in order to discuss techniques and to smooth out any difficulties. On "Clamp" days there is general admin. work to be done, and the pilots brush up their gunnery and signals procedure. Each, into the bargain, has some regular duty outside his flying, *i.e.*, Flight intelligence officer, Flight quartermaster, transport officer, signals officer, photographic officer.

The C.O. has an especially exacting task, for he must know R.A.F., as well as Army, administration—besides flying 40 hours or so a month. As might be supposed, the mixed nature of the unit entails much duplication, though two clerks (one from each Service) manage to keep the paper work at bay.

An average serviceability of 80 per

cent. is a measure of the job being done by the ground crews—half of whom are Army and half R.A.F.—in snow, mud, cold, dust, or come what may. Each Auster has a distinctively painted spinner; whenever an A.O.P. lands from a sortie (generally of 2¼ hr. duration, but often as long as 3 hr.) it is marshalled straight into its pen and made ready for the next operation. Well cared for as they are, however, the aircraft take a continuous beating, especially in winter. At one period engine and airframe icing was responsible for eight forced landings in ten days. Happily, all but one were on the strip.

After concentrated discussion of the foregoing matters—for our visit could only be brief—the Flight obliged by providing us with some first-hand impressions of front-line flying.

There were three Austers—my own, flown by Capt. R. S. Deacon, R.A.A.; McLaren's (Capt. K. Perkins R.A.); and a third, which was making an actual operational sortie, and from which Capt. Joyce had promised to keep an eye on us.



An Auster A.O.P.6 of No. 1903 Independent Air O.P. Flight in its wind shelter

As soon as we were airborne we could see that the roads and camps were lively with vehicles and men; but the liveliness ceased abruptly behind our own front line and nothing moved on the scarred and frozen ground beyond.

Capt. Deacon had loaned me his binoculars, promising that should I spot any men in the enemy positions, he would show me how quickly the artillery could be put on to them. So while the Auster climbed, I peered through the side panels, practising myself in the use of the glasses.

There was no intercom., so I could not ask what was what; and, in any case, it was difficult to centre selected features in the glasses. After some casting about I picked up a trench system, and, having comforted myself with the thought that the Chinese were sound asleep following a heavy night, I straightened up and glanced ahead. Evidently I was not altogether right about the weary Chinamen, for suddenly blotching the morning sky, no great distance away, came five black bursts of flak. Supposing my own machine to be the intended recipient, I assessed the marksmanship as mouldy to putrid, then I noticed Capt. Joyce's Auster—closer to the bursts than our own—removing itself in the approved Porteous manner.

It has always seemed to me that the flacking of Austers ranks with the stalking of butterflies with a 12-bore—but that sort of thing is now being done. Happily, the body of opinion favouring the protection of Austers is strongly represented among the Gunners, and to watch them respond to an urgent complaint (accompanied

by appropriate map references) was a satisfying experience.

As I saw it, flak suppression entails the rapid and liberal application of red-flashing 25-pounder shells to the affected area. To be factual, the Division had eight guns saturating the designated spot in one minute. Even so, the position was reckoned to have been only neutralized—not destroyed; and it was thought probable that the heavies would be put on to it next day.

For half an hour we were now able to buzz unmolested over, and a mile or so beyond, the enemy lines. But peer as I might into the maze of deep trenches interspersed with cleverly-positioned bunkers, I saw nothing to betray any movement or activity of any kind, either among the earth-works themselves or on the roads and tracks behind. What I did see was a deep, cunningly prepared defensive system hewn in the rugged earth and rocky hills, spattered with shell and bomb craters, but threatening to exact a heavy toll of assailing forces. I saw, too, the vaulting eruptions of 1,000 lb. bombs delivered on the left by U.S. Marine Corsairs, and the curtains of dirt and smoke that hung in the air for minutes afterwards.

But I am still not sure which was the most welcome sight that morning—that of L.A.C.s Goodfield and Bennet marshalling our Auster in; the glass of sherry which Major Hailes, who had by then returned, offered us in *Casa Mitty*, the mess; or a cigarette, tendered from a silver box inscribed "1903" from the Divisional Artillery. Korea 1951-53.

The major took his leave to make

(Continued on page 10)

A Successful Day at Rearsby

A VERY VARIED SHOW WAS presented at this year's Air Display organised by the Auster Flying Club. Fortunately the weather was really ideal for flying, tending to be a little gusty for the light types.

The show was opened to the music of the trumpet band of No. 1 City of Leicester squadron—the founder squadron of the Air Training Corps. An interesting parade of visiting aircraft provided the first airborne activity, and included Dunlop Avia-

Spraying Contractors, the resultant spray was lightly blown across the field and over some of the crowd. It was reported that during this item a pilot standing next to the control table supporting a glass of beer, upon smelling paraffin hastily put out his cigarette !?

Ranald Porteous then gave his usual impeccable performance of aerobatics and crazy flying in the Aiglet Trainer G—AMMS.

The first jet aircraft in the display



The B47 Stratojet makes its run across Rearsby.

tion's Dove, Aviation Trader's Ercoupe, a Hirtenburg H. S. 9A, Fred Dunkerly's Gemine and Ron Paines Hawk Speed Six which gave a very fast run in front of the enclosure. An ultra-light fly-past included a Fairey Junior, B.A.C. Drone, Dart Kitten and a Topsy Trainer. This was concluded by Geoffrey Allington in the Fairey Junior giving a very neat show of aerobatics.

A distinct odour of paraffin accompanied the next item, which was an Auster Aiglet of Aerial

then appeared flying past the crowd with "everything down" flaps, wheels, and arrester hook, it was an Attacker flown by Commisioned Pilot Darlington, both from the Naval Air Fighting Development Unit at West Raynham. After a number of well-judged high and low speed runs the Attacker disappeared into the distance in a searing climb.

The Auster Ambulance/Freighter was then loaded with two stretcher patients from an Ambulance and took off to complete a circuit before both patients were unloaded. Many

guests to the display who witnessed this event commented upon the speed of the actual loading and unloading of the stretchers. Later in the afternoon the Ambulance/Freighter performed again, showing how a box of crockery could be dropped through the rear loading door from a height of about 8 ft., without any breakages occurring. An immaculate Gloster Gladiator was then flown by Mr. V. H. Bellamy (an ex war-time Gladiator pilot) Bellamy brought the Gladiator to within a few feet of the enclosure, showing off a surprising turn of speed.

As the afternoon progressed it was obvious to the crowd that much thought and organisation had been applied to the show, for quickly following the Gladiator was a road safety demonstration by the local police, an excellent aerobatic display in a Green Olympia sailplane by George Thompson, and an extensive and well-planned demonstration of A.O.P. direction to Artillery fire, by No. 664 Squadron R. Aux A.F. These were followed by the individual aerobatics of a Meteor 4 of the R.A.F. Central Flying School. One of the highlights of the afternoon was the arrival of a B47 Stratojet. After cruising around in the vicinity of Rearsby for some time the aircraft was flown across the airfield at about 450 m.p.h., at nearly 1,000 feet. When the B47 started to make its run in towards the airfield the amount of smoke omitted from the engines was considerable, presenting a big black smudge on the horizon. In the Club House later on the B47 was referred to as a "dirty dart." After the Stratojet

had cleared Rearsby the Patrouille d'Etamps gave a remarkable display of aerobatic formation flying, followed by two squadrons of Meteor 8's of 610 and 611 squadrons R. Aux. A.F., giving a polished performance of synchronised aerobatics. To round off the very varied show small boys were selected from the crowd and were asked to request the very obliging pilot of a Chipmunk, F/Lt. Hutchins, to perform aerobatics, instructions were passed by R/T from the control table. This seemed to carry on for hours with the Chipmunk and F/Lt. Hutchins nearly going frantic. What should have been the end of the show, proved to be the last but one with the late arrival—from his honeymoon, of Chuck Thompson, dubbed by the local press as the "Human Spider." Too late to perform his aerial ladder act, Chuck did a very delayed parachute drop, plumb into the middle of the airfield.

* * *

WE KNOW THE EFFECT of many things but the cause of few, experience therefore is a surer guide than imagination.—*Carlton.*

THE SHARP END

(Continued from page 8)

the Flight's third counter-bombardment sortie of the day, and I myself boarded the L-19 which had arrived to take me down to Seoul. To have visited those two great little Auster Flights, lodged up by the 38th parallel, was a privilege which I value above all others recorded in my 32,000-mile journey.

Winged War*

Like pigeons, cockchafers can be destroyed only on the wing, and the pest destroyer, too, must take wing to defeat them. But wings cost money, so the farmers of the Rhone Valley in Switzerland co-operated to obtain the services of aeroplanes to deal with the worst of all pests to their crops and fruits. This remarkable campaign is here described

by C. S. Smith

SWITZERLAND'S cockchafer beetle campaign just concluded, ranks as the most outstanding example of co-operation among farmers to enable the use of the aeroplane for pest destruction that has been seen in recent times. It is also largest air spraying campaign ever carried out in Europe.

The cockchafer (*melolontha melolontha* L), known in England as the may bug, causes little trouble here. In Switzerland, where its natural enemies are few indeed, it is a very serious pest. The aeroplane is the only practical means of combating it.

Let me give a picture of the locality and the problem. The Rhone Valley is in the Canton of Valais, in the south of the country. At its widest, the valley is about a mile; it is 65 miles long. On both sides the Alps rise sheer to 10,000 ft. and, except for terraced vineyards on the lower, south-facing slopes, cultivation is confined to the flat valley bottom. Trees, coniferous higher up, but broad-leaved—oak, sycamore, willow, poplar—on the lower slopes, grow up to 2,500 ft. It is these trees that become infested with cockchafers in flight years.

The White Grub

Crops are asparagus, corn, lucerne, potatoes, soft and stone fruits and, of

course, pasture. Soil is alluvial, coarse but alkaline, deep but lacking body. In this light soil lives the larva or white grub of the cockchafer. For three years it devours the roots of every crop that grows, even the roots of young fruit trees, and defies all efforts to eradicate it by soil fumigant. In winter it burrows down 12 to 30-in.

When the sudden heat of spring sun warms the soil in the third year, the larva, now a mature beetle, crawls to the surface and takes wing to the trees. There it mates, and the females descend to the ground again and there lay the eggs—40 to 60 eggs per beetle in the few weeks of adult life—that will, within a month or so turn into the white grubs that for another three years will plague the roots of the valley's crops.

In Britain, rooks, starlings, and other birds prey upon the beetle; its natural enemies in the Rhone Valley are few, if any—certainly no rooks or starlings. The specie thrives; a population of a million to one acre is not unusual. I saw a young sycamore, not more than 10 ft. high, with a couple of hundred beetles feeding on its leaves.

Collected By Children

Formerly Swiss commune authorities paid a few centimes per litre to children for collecting the beetles. As a form of pest destruction this was

* Reproduced by kind permission of "The Farmers Weekly."



An Auster J5G aircraft operated by Pest Control Ltd. of Cambridge, is seen taking part in a large-scale aerial spraying operation against cockchafer in Switzerland.

[Pest Control photograph

neither here nor there. Year after year the larvae in the ground created havoc. It became apparent that the only way to tackle the cockchafer was when it was on the wing, and that involved wings to get at it.

Fortunately, the chafer has regular habits. Flight years can be predicted. In the Rhone Valley they are 1947, 1950, 1953; and 1956 and 1959 will be the future ones. The cycle is different in other cantons. It became obvious that air spraying in these flight years was the only answer. How, was the question.

Three years ago the Swiss Government sought the help of Pest Control, Ltd., Cambridge, and a contract was signed. Helicopters and fixed wing aircraft sprayed D.D.T. emulsion on the treetops. It proved a success, a kill of 50 to 90 per cent. from area to area was recorded.

So successful was it that the Cambridge firm was invited again this

year to carry out "Action Hanneton" (hanneton is the local name for the beetle) on the grand scale.

The organisation of this scientific air-agricultural campaign was remarkable. Switzerland consists of several "cantons" or states. Each canton is divided into "communes," similar to our parishes. The farmers of the communes agreed to paying for the spraying on an acreage basis. Their payment was made to the communes; the communes in turn paid the Canton of Valais authority. The canton paid the government and the latter settled the Pest Control bill.

Each commune appointed a number of field men who took note of the number of chafers emerging or infesting the trees, and each evening during the campaign, there was a meeting at the central bureau (at Sion), presided over by the entomologist from the canton's agricultural school (who was in charge of the

campaign). The day's spraying results were considered, and the following day's campaign agreed.

A Scientific Expedition

For Pest Control it was a major scientific expedition. Five aircraft—two Hiller helicopters and three *Auster* fixed-wing machines—with all the ancillary equipment—insecticide and fuel tankers, spares, ground crews and the rest—had to be transported from England to the Rhone Valley. The *Austers* flew in to the little military airstrip at Sion. The helicopters, dismantled, shrouded and mounted on trailers behind the tankers, were driven to a channel port, shipped to Dunkirk, and then driven in convoy 700 miles across France into Switzerland.

Air spraying in this narrow valley is fraught with risk and calls for a high degree of flying skill. The Swiss never put their wires and high tension cables below ground or along the valley slopes. Always they run over the flat valley bottom until they seem to cover the place like a network. Air photographs were made of the whole spraying area from 10,000 ft., and on these, each cable, wire or of what-have-you, was indicated in a key colour according to whether high or low tension cable, telephone wire or what not.

Mostly, spraying was done in early morning and late in the evening when still air would allow the emulsion to sink accurately on to the requisite tree tops. Six hours' spraying was about the average per day.

Flying Difficulties

And there were other flying difficulties. Ground temperatures in the



The larva or white grub. For three years it lives in the soil devouring the roots of every crop that grows.

[Pest Control photograph]

valley might be 75 degrees, but there was still snow on the hilltops. And if a wind did spring up it would be funnelled into something quite strong in the steep valley. Hot sun on bare rock gives rise to strong thermal currents and other forms of air turbulence, all of which made flying more difficult.

Two airstrips were used mainly—the one at Sion, and another at Bex, 20 miles distant. But a spraying aircraft should not be more than five miles from the spraying area, so at times any suitable field was used. One of these, just long enough for *Austers* to take off, was actually being irrigated at the time.

For smaller areas where odd groups of trees required precise spraying, the helicopters, carrying 40 gallons of emulsion and giving a swath width of 45-60 ft. close over the treetops, were



The adult cockchafer—alias Maybug, May-beetle, Hanneton, etc.

[Pest Control photograph]

employed. The *Austers* did the larger areas, carrying 50 gallons a trip and giving a swath width of 60-90 ft. at 50 ft. over the tress.

Turn round—*i.e.*, loading with fuel and insecticide—became a fine art. There were many occasions when the maximum turn-round time of two minutes was improved upon. The average sprayed per day was 1,800 to 2,000 acres. Farmers were only too keen to participate; those whose land was to be sprayed would wait, with their staffs, armed with flags, ready to give vigorous signals to the approaching aeroplane.

Results were impressive. The evidence lay in thousands of dead beetles that darkened the roads under the trees, and it was a curious experience to stand beneath sprayed trees and listen to the beetles dropping out and stirring among the grass and dead leaves on the ground.

This campaign has shown how the scientist and the aircraft operator can combine. There was little Switzerland could do about the cockchafer until D.D.T. was discovered during the war. It was known to be toxic to chafers, but the question was how to get it in contact with them. The aeroplane has answered that one.

The emulsion is toxic whether it touches the beetles or whether they eat the sprayed tree foliage, and it remains toxic for about 14 days.

Three Years' Respite

Switzerland has comparatively little land for growing crops. What there is has to be fully utilised, and I have never, anywhere in this world, seen fruit so intensively cultivated on such poor soil as in the Rhone Valley. It is really quite fantastic and is only made possible by the use of large quantities of fertiliser and by thorough irrigation. Production must be tremendous.

The chafer was a constant and growing menace. 'Action Hanneton' has given another three years' respite to crops. What it has meant can be gauged from the words of a competent Swiss agriculturist. He said: "We should have had to give up intensive agriculture in this valley if we hadn't been able to spray the cockchafer in this way." Which is a remarkable testimonial to the value of the agricultural aeroplane.

And so the day may come quite soon when the big chocolate models of the cockchafer will no longer be sold to the children by the sweet shops of Valais.

* * *

From a Stewardesses exam. paper.

Q. If you found a fire smouldering in the passengers wardrobe, what action would you take?

A. I would remove all clothing and report to the captain.

* * *

POWER WITHOUT POLICY can impose nothing on a determined people, not even liberty.—James Cameron.

VICKERS VISCOUNT

FOUR ROLLS ROYCE DART ENGINES

Travellers by BEA services to Switzerland, the Mediterranean and Scandinavia can now enjoy the unforgettable experience of flying in the Viscount. Enthusiastic reports from passengers promise well for those airlines which have made an early decision to adopt this new form of air travel.



Vickers-Armstrongs Limited
Aircraft Division · Weybridge · Surrey



Accessories for Owners

THE WIND-DRIVEN GENERATOR

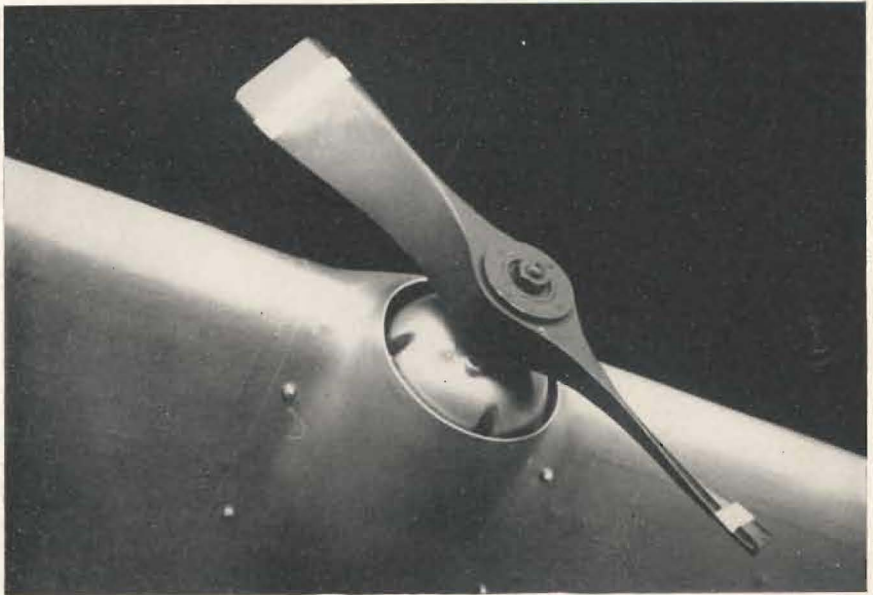
WHERE AN ADDITIONAL electrical supply is required for use with radio, or starter, landings lights etc, or combinations of these, we recommend that owners fit this type of generator. For the J5 series of aircraft it is positioned on the leading edge of the starboard wing just outboard of the wing tank bay. On the J1 series it is positioned closer to the wing root. Presenting a neat appearance when fitted and offering negligible drag, the generator has proved very popular and requires little maintenance. A voltage regulator is supplied with the modification kit, which avoids unnecessary overloading of the battery.

For operators who employ Austers for training purposes, which include

a considerable amount of "circuits and bumps" flying, a special fine-pitch windmill of larger diameter than the standard is available. This windmill will give full charge in the climb, offsetting any heavy discharge to the battery through the use of radio and landing lights etc., as in the case of night flying. A suppressor is included for the effective suppression of any interference to radio reception the generator may cause.

Modification kits are available for the following Auster types J1, J1B, J4, J5, J5 B, J5F, J5G, Model "D," and civil Mark 5 aircraft. Each kit is accompanied by a set of drawings, which considerably ease the fitting of the generator.

(Continued on page 20)



The wind-driven generator



THE ROYAL AERO CLUB TOURING COMPETITION

A £50 PRIZE FOR GAINING second place in the above competition was awarded to Mr. Cyril Gregory, a Taylorcraft Plus "D" Pilot, by Col. R. L. Preston, secretary general of the Royal Aero Club. The Competition, held on July 25th, at Panshanger Airfield, in Hertfordshire, was intended to test the touring abilities of pilots.

On the morning of competition each pilot was given an envelope containing various forms of flight instructions, a map and four sealed envelopes. In half an hour the pilots had to mark their map, calculate courses and assess fuel consumption and E.T.A. back at Panshanger. The maps had five areas covered with gummed paper to simulate 8/8 ths. cloud in those localities. Pilots were allowed to fly up to 3,000 ft. during the competition which took place in clear weather, with a few clouds about.

Out of the possible number of marks that could be obtained, (200) Mr. Gregory achieved 103.

THE CHEAPEST AIR DISPLAY IN BRITAIN

THREE LIGHT AIRCRAFT were all that flew in the world's smallest air display

held at Blackpool airport recently. The main item in the show which lasted only a few minutes was a delayed parachute jump by Kurt Hauswald, an ex-Luftwaffe pilot. Jumping from an Auster belonging to Blackpool and Fylde Aero Club. Kurt Hauswald brought his total of parachute descents to 60. The cost of sending three aircraft skyward was about £5. The chief Flying Instructor, Clifford Ashley said that the intention behind the show was to stimulate an interest in club flying.

AUTOCRAT AND ACROBAT

A WELL KNOWN PERFORMER at Air Displays in England, "Chuck" Thompson of the Apex Group, now has a new type of aerial stunt to perform. He spends a considerable



"Chuck" Thompson during practice

time on the end of a rope ladder attached to the lift strut of an Auster Autocrat doing actions similar to "physical jerks," and then drops off into space hoping to land on the airfield.

NORFOLK PILOTS WIN TROPHY IN 4-NATION RALLY

TWO NORFOLK PILOTS won one of the trophies awarded in the seventh international air rally held in France, in the province of Anjou, at the weekend. They are Mr. K. R. Waldron, of Ludham, an ex-Fleet Air Arm pilot, and Mr. H. B. Showell, of Clippesby, an ex-R.A.F. pilot. . .

Mr. Waldron and Mr. Showell flew to France on Friday and arrived back in Norfolk on Monday, having completed 1,000 miles in the air. At the rally, which was organised by the Aero Club of West France, they competed with pilots from Britain, France, Switzerland and Belgium in flying tests over the wine-growing districts of Anjou.

They were placed seventh out of 42 entrants, and were awarded the trophy for gaining most points

among the British entrants. They flew in Mr. Showell's Aiglet Trainer.

PRaise FOR THE CIRRUS AUTOCAR

A LETTER WE HAVE RECEIVED recently at Rearsby from an owner who has acquired a Cirrus Autocar, contained the following statement from which it is obvious that he is well satisfied.

"Very often when the Manufacturer specifies an article it is exaggerated, but in the case of the Cirrus Autocar, it will certainly do everything that you say : in fact it will climb at over 1,000 feet per minute."

A MORE POWERFUL SPEECH BROADCASTING UNIT

CARRIED OUT RECENTLY at Rearsby was the testing of an Auster Mk. 6 A.O.P. fitted with Tannoy Amplifying equipment for speech broadcasting from the air. A 200 watt amplifier was installed in the cockpit and two 100 watt speakers were attached to the wing lift struts. The Equipment was designed to be operated by either the pilot or observer, who use a specially designed microphone, which cuts out cabin noise etc.



Showing the port 100-watt speaker, this photograph was taken during the recent tests.

FLYING PRINCE

ANOTHER VISITOR to our works in recent weeks was Prince Henry Kimera. Now studying at the Bristol University, the Prince belongs to the university air squadron. Prince Kimera's brother is the Kabaka of Buganda, ruler of 2,000,000 people on the shores of



Prince Kimera.

Lake Victoria in Uganda. Whilst touring the works at Rearsby the Prince flew with Mr. E. C. Harrison of the Sales Department in an Aiglet Trainer Tourer, his pet manoeuvre it appears is a steep turn.

TOKYO VISITOR

A RECENT VISITOR to Rearsby was Mr. Harold H. Lawson, Director and General Manager of the Sino British Engineering Corporation Limited, Tokyo, Auster Agents in Japan. Mr. Lawson called in at



Left, Mr. Harold H. Lawson, a visitor from Tokyo, and Ranald Porteous.

Rearsby for a general discussion and tour of the works. In the adjacent photograph he is seen with Ranald Porteous.

AN AUTOCRAT WINS RHODESIAN RACE

A RACING SUCCESS was recently accomplished by an Autocrat owner in Rhodesia. The successful owner was Mr. H. H. C. Perrem, and the race was the Rhodesian Centenary closed circuit Air Race held at Salisbury on the 14th June last. The Autocrat was entered against 27 competing aircraft from all over Southern Africa and the two Rhodesias.

The race was over a distance of 110 miles, the course was triangular, each leg being 36.6 miles long. The winning Autocrat was navigated by Mr. Perrem's wife, carrying two people; the win is all the more commendable when it is noted that all competing aircraft reduced weight as much as was possible. Mr. and Mrs. Perrem are now the proud holders of the beautiful 9-in. high

silver cup presented by Wing Commander Plagis, D.F.C.

With long-range fuel tankage installed Mr. Perrem is doing a lot of long range flying across densely infested elephant country between Umtali direct to Blantyre in Nyasaland, and Umtali direct to N'dolo in Northern Rhodesia. In a recent letter to us Mr. Perrem said that the arrival of his Autocrat in various widely spaced territories caused considerable surprise in control towers until they became used to its range. When Mr. Perrem flew the Autocrat out to Rhodesia in 1950 he made only five landings between Lympne and Cairo as follows:— Lympne — Marseilles — Naples — Tunis — Idris (ex Castel Bennis) — El Adem — Almaza.

ACCESSORIES FOR OWNERS

(Continued from page 16)

When owners write for details it would help the service department if the type of Auster is quoted, and details given of the particular electrical equipment installed, together with the registration of the aircraft. Further information may be obtained from the Service Department, Auster Aircraft Limited, Rearsby, Leicester, England.

* * *

THE TRUE GREATNESS of nations is in those qualities which constitute the greatness of the individual.—

Charles Sumner

* * *

A HANDLE TO YOUR NAME will open many doors.

AUSTER SERVICE BULLETIN

Auster Aircraft Limited
Rearsby, Leicester, England

Issue No. 31

IN ORDER THAT AUSTER owners and operators may be kept aware of the latest developments, a new list is reproduced below, giving brief details of some of the more important modifications which have now been introduced. The Auster Service Department will supply on request, further details.

Mod. 2251—J.5.F. Mod. 2252—J.5.G. Repositioning of KiGass primer adaptor on firewall to avoid the possibility of the occupant's foot damaging pipe.

Mod. 2528. Introduces a fine pitch generator windmill specially suitable for climbing and recommended for

training aircraft engaged on circuits and bumps.

Mod. 2527. Introduces a compass light and dimmer switches for the existing cockpit light, the position of the latter is also corrected so that the beam shines parallel with the instrument cross tube. It should be pointed out to owners of aircraft fitted with navigation lights that this modification should be incorporated upon the next C. of A., otherwise the A.R.B. will not approve the aircraft for night flying.

Mod. 2525. Introduces a sun cover over the compass.

Mod. 2541. Introduces a battery and radio access door for J.5.F. aircraft.

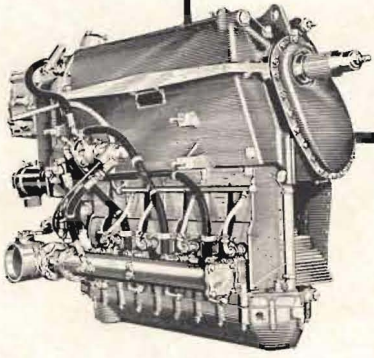


Saunders-Roe Skeeter

A long tradition of sound engineering behind it, a fine operating life ahead of it, the Cirrus BOMBARDIER 180 b.h.p. direct injection engine has gained the high approval of designers and users throughout the world of aviation. A reliable, high-performance engine with an above-average power/weight ratio, the "Bombardier" has shown itself the perfect choice for light aircraft. Its economic operation, rapid throttle response and freedom from icing are the outstanding characteristics.



Auster B.4



Cirrus

BOMBARDIER

Blackburn and General Aircraft Limited, Brough, E. Yorks

EXTRACT FROM "FLIGHT" JUNE 8th 1951 ... "it promises to embarrass existing primaries"

WIGLET TRAINER

Economical to operate from higher utilisation, simple maintenance, and low initial cost.

Cruises at 110 m.p.h. Fitted with 130 h.p. Gipsy Major I engine having 1,500 hours' overhaul life.

Performs continuous aerobatics without losing altitude.

Handling characteristics tailored to suit present-day training requirements.

Side-by-side seating in widened cabin. All-round vision.



Comfortable three-seater tourer version also available.

Spares and Service available all over the world
Agents in most countries, from whom further
information can be obtained.

Auster
AIRCRAFT LIMITED
REARSBY · LEICS · ENGLAND