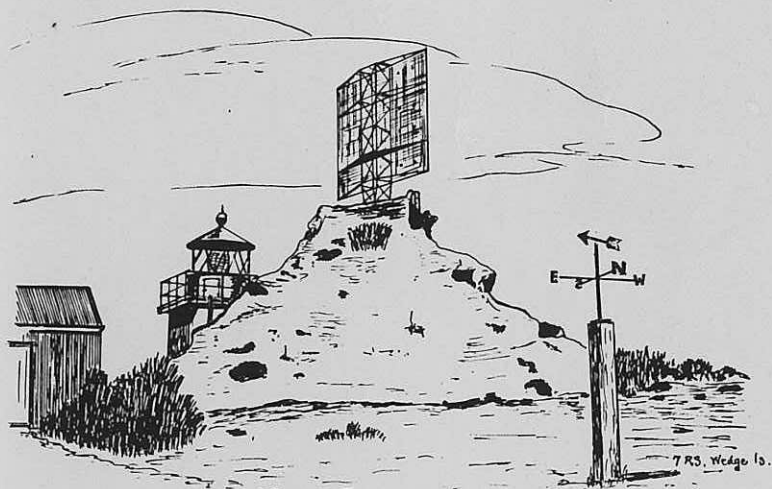


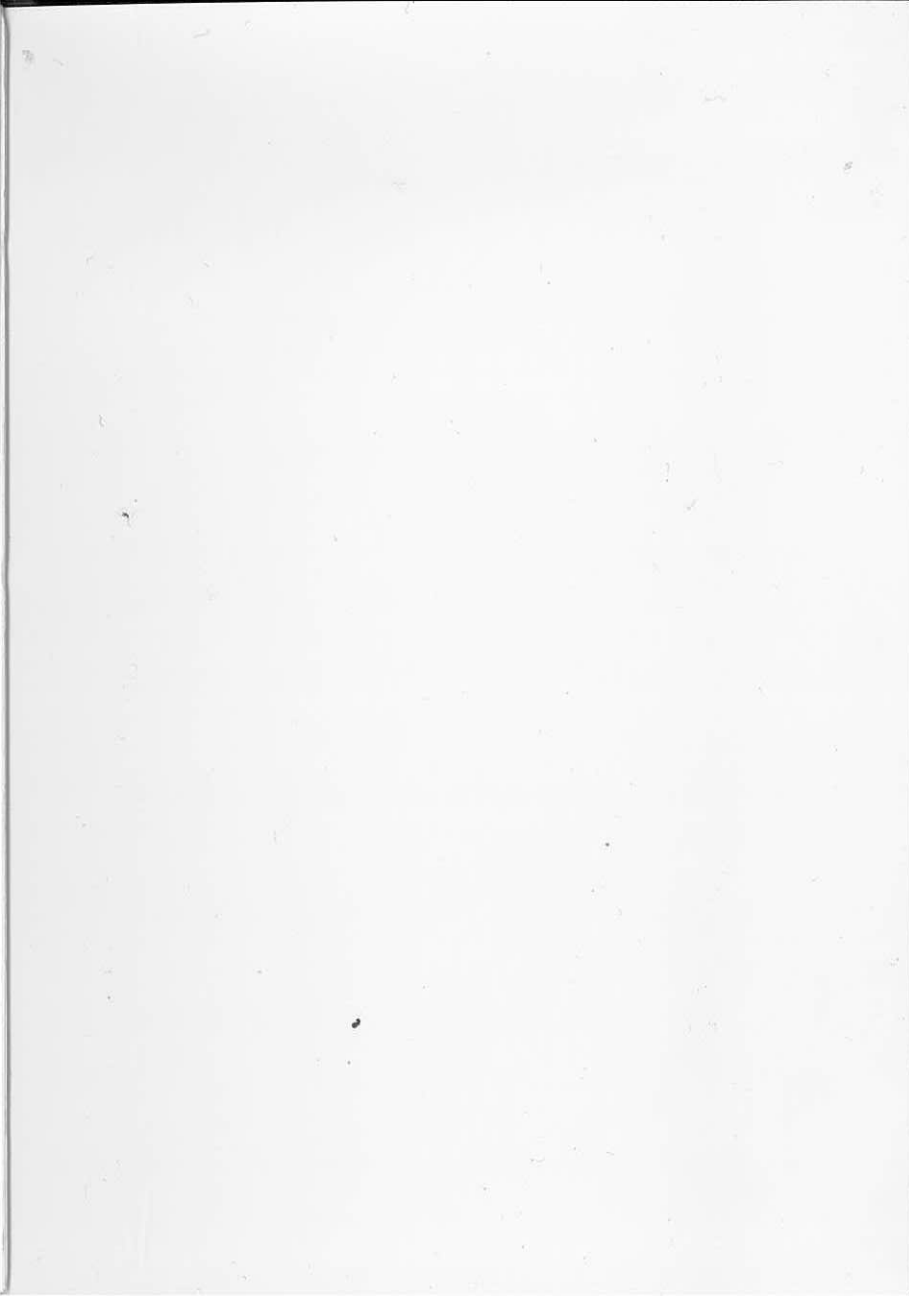
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Radar

Sketchbook



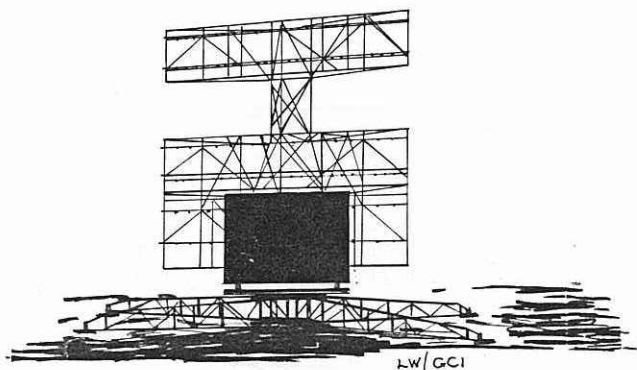
MORRIE FENTON





Radar
Sketchbook

A BRIEF GLIMPSE OF
THE SECRET R.A.A.F.
STATIONS OF W.W.2.



MORRIE FENTON

RADAR SKETCHBOOK.

A Brief Glimpse of
the Secret R.A.A.F.
Stations of W.W.2.

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Morrie Fenton.
(M.E.Fenton)

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*Alan & Mary
Best wishes
Thanks for all your
help.
Morrie Fenton*

RADAR SKETCHBOOK

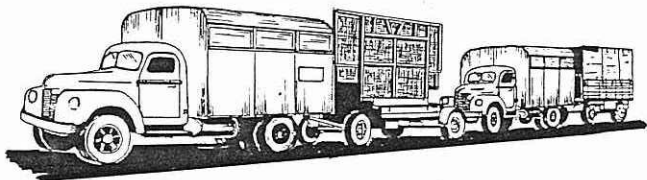
Not all RAAF Groups in WW 2 were giant air bases, or large units with hundreds, even thousands of personnel. The small Radar units, for instance, usually had about 25 to 30 personnel, and each worked as a completely independent little community. There were Radar operators and mechanics - guards and wireless operators - a fitter/DMT - sometimes a general hand. There was usually a clerk in his orderly room or tent - a few sergeants to see all was well, and most importantly a clean and competent cook in charge of the kitchen. A Commanding Officer of not too senior rank headed the station complement. There were camp duties and walkabouts, maybe a cricket match or an occasional picture show. Everyday life around the station was usually fairly easygoing provided the 'On Duty' roster was strictly adhered to, and the equipment was always in good order and operational.

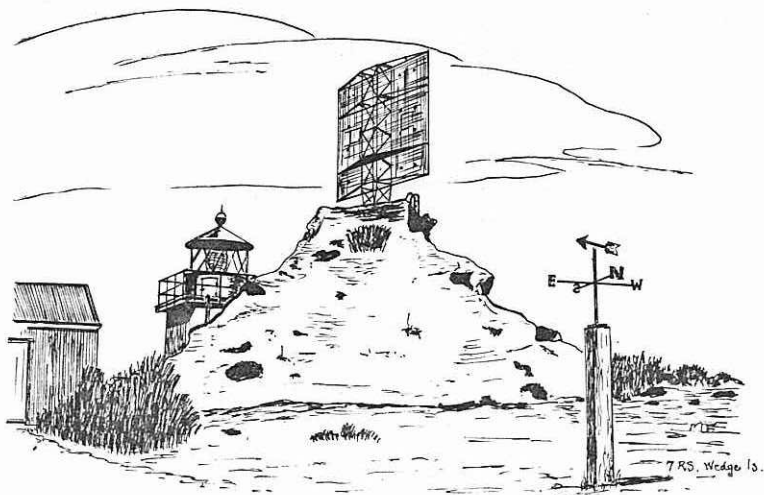
Having served out a 'tropical tour' at a couple of fairly comfortable GCI Doovers, it was with some astonishment, almost disbelief, that I saw in the recent Pictorials, and heard at the Reunions, of the decidedly uncomfortable operating conditions tolerated and cheerfully endured by many Radar operators, particularly on the portable LW/AW stations. Extreme heat, weird bugs and insects, tropical illnesses, even headhunters, cannibals and the occasional enemy incursion - all seem to have been endured stoically and even with some good humour in decidedly uncomfortable Doovers and camps, from the N.W.A. through to the islands almost as far north as the Philippines.

This small sketchbook shows a selection of about twenty Doovers and a few camp buildings. It has been put together as a small recognition of the fine record and service of all Radar personnel, whether in the cold blockhouses down south, or in the hot, airless Doovers of many northern stations.

Most of all, though, it's a tribute to the friendships... some for just a year or two... some of fifty years... some by letter or even by phone. And thanks for all the friendly help.

Morrie Fenton.





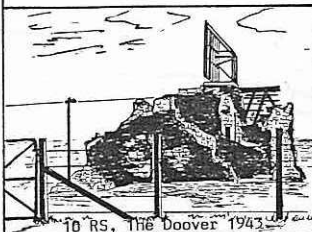
7 RS, Wedge Island. The Doover was sited on the 800 foot cliffs of the windswept island, and on really stormy nights it proved difficult even to gain entry to the tower because of wind force - and conversely, equally difficult to leave it.

The trip out to the island by fishing cutter became almost legendary because of the choppy seas, and it's on record that one seasick airman made the trip lashed to the mast - and later actually refused leave rather than make the return journey.

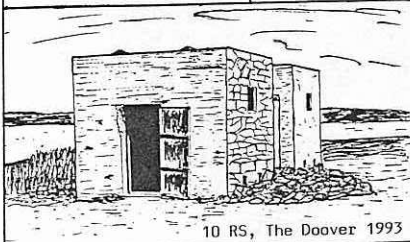
Because of the isolation, the men of 7 RS became skilled in organising their own recreation, and fishing, swimming, cricket, football and concerts became regular activities. This ability to organise continues to this day, for annual reunions are arranged by the unit's long serving cook, and a nostalgic 'Memories' pamphlet is produced for each occasion.

10 RADAR—
(YANKALILLA)
CAPE JERVIS.

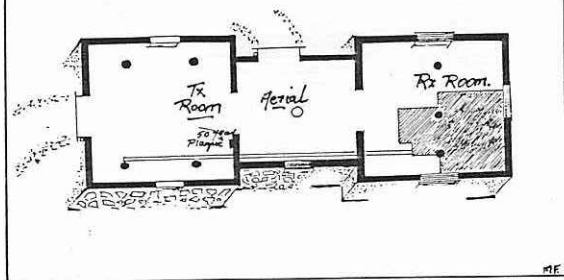
50 Years Celebrated,
 10th March 1993.



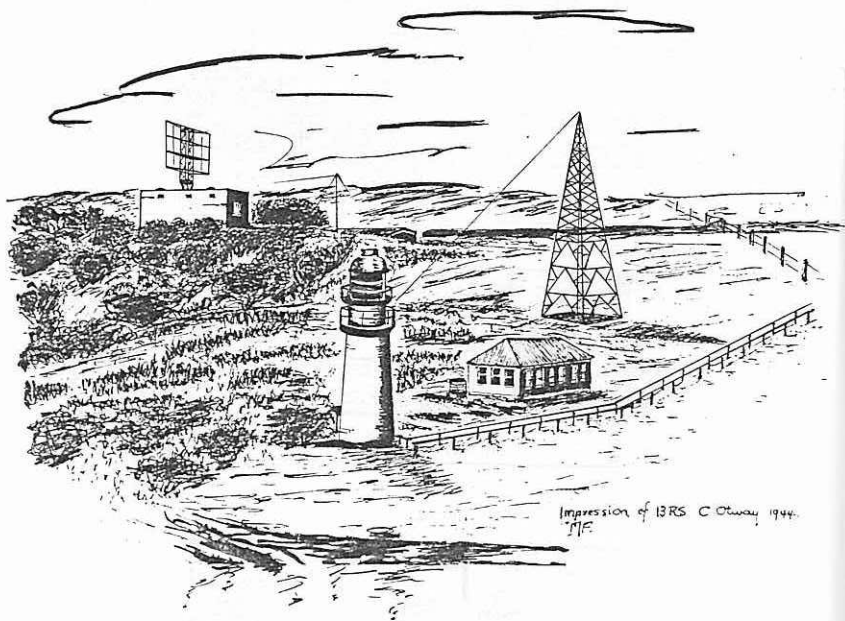
10 RS, The Doover 1943



10 RS, The Doover 1993



10 RS Cape Jervis. Two Radar stations only became operational in South Australia after the fortunes of war had changed dramatically. 10 RS was built on a strategic site from which it was able to monitor the narrow waters of Backstairs Passage. Mk. V COL was installed, and the station was staffed largely with WAAAF personnel. In March 1993, the station celebrated its 50 years, and a goodly number of the wartime personnel was able to gather at the Doover which they found to be as solid and strong as ever, before enjoying a celebratory lunch together.



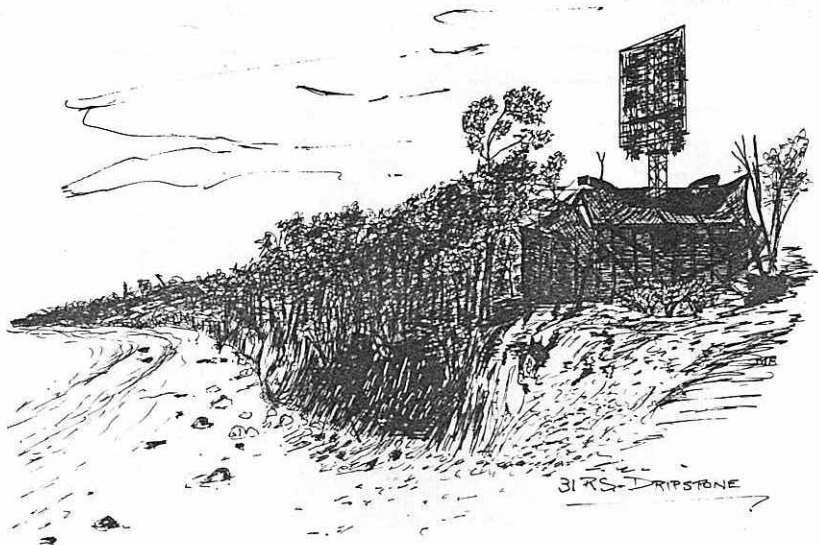
Impression of 13 RS Cape Otway 1944.
J.F.

13 RS Cape Otway was built on the first line of sandhills behind the famous old Otway lighthouse, and the camp buildings were constructed immediately behind the Doover in the sheltered hollow.

The station, together with 14 RS across at Wilson's Promontory, guarded the entrance to the Bay, and most of the plots were of shipping approaching the Port of Melbourne.

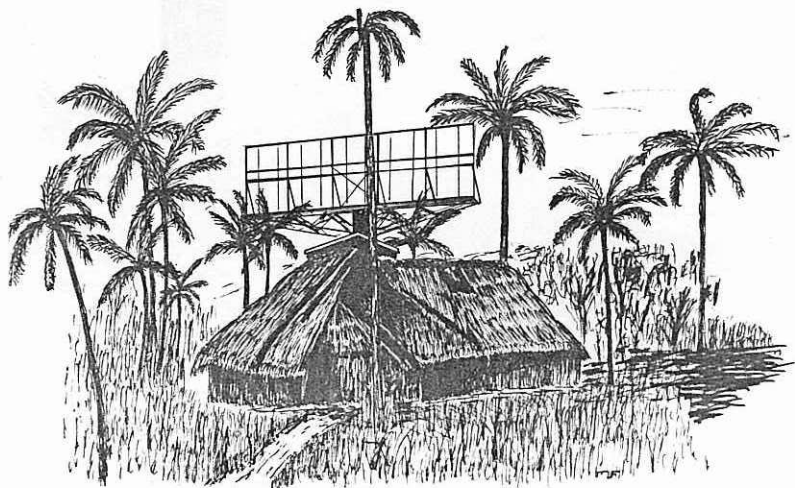
The Doover was a large concrete blockhouse divided into three, and a landline provided direct contact with Melbourne. In the camp Rec. hut was a full size billiard table, and as the camp was only twenty miles from Apollo Bay, a Saturday night excursion to the pictures in the Institute was a regular thing.

Today, only the lighthouse and cottages remain, though the deserted blockhouse can still be found among the low scrub and bushy growth.



31 RS at Dripstone is understandably the most famous of Australia's 140 Radar stations, and its historical importance has mainly centred on the early days of the Pacific war, and the air attacks on Darwin. But 31 RS was also associated with other locations.

The station was moved to Point Charles when its Dripstone site was no longer usable - then to Fenton in early 1944 when the station there, 319 RS, moved on to Drysdale. By some strange manoeuvre, 31 RS next appeared at North West Cape at Exmouth in W.A., but this probably came about after a station number change for the big AW already there, which continued sometimes to be known as 310 RS - sometimes as 31 RS. During this confusion, the tower and equipment managed to be destroyed by a cyclone. This happened in February, 1945. After again being re-equipped with LW/AW, the station eventually moved on to Morotai.

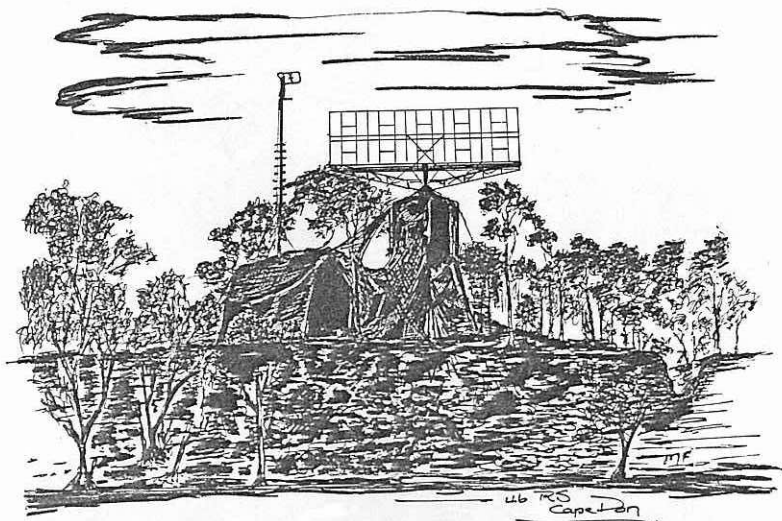


37 RS Milne Bay

37 RS Milne Bay. The heavy Mk V COL equipment was floated ashore in June 1942, and by August the station was ready to operate at its Gili Gili plantation site. As the tower and gear was prepared, so village natives from nearby camouflaged the working areas beneath a covering in native hut style, with a roof of woven thatch, the exception being the massive aerial which protruded to the heavens; and the interrogator aerial which was mounted on top of a lopped coconut palm. Soon after coming on air, enemy aircraft were detected at 150 miles which was considered to be pretty good for a new station.

Down the track some 200 metres from the Doover and among the coconut palms, the sleeping hut was built, also in native style.

The station remained operational until December, 1945.



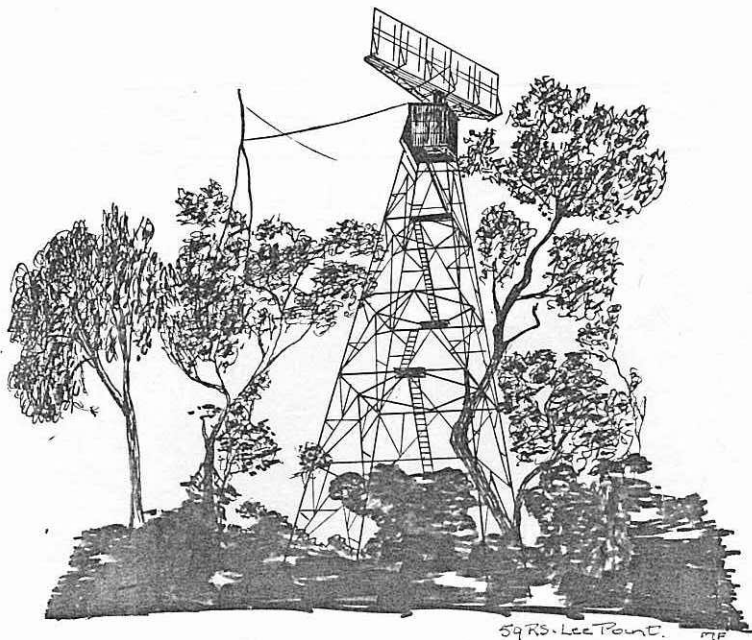
46 RS at Cape Don was a vital station in the chain protecting Darwin, as it covered the approaches from the North East. It was first equipped with AW gear, and was installed in January 1943 near the well known lighthouse at Cape Don. It then joined with Dripstone, Bathurst, Port Keats and Mount Woods in guarding Darwin and its defences.

In September 1944, Mk.V COL equipment was installed, and the S.S. COOLEBAR arrived with 130 tons of new Radar equipment.

The men of 46 RS lived in 2 of the 3 houses at the Don, and 'Johnno' and George, the two lighthouse keepers, continued to live in the third. The station was noted for its vicious sandflies, which always were at their worst at sundown just after showers.

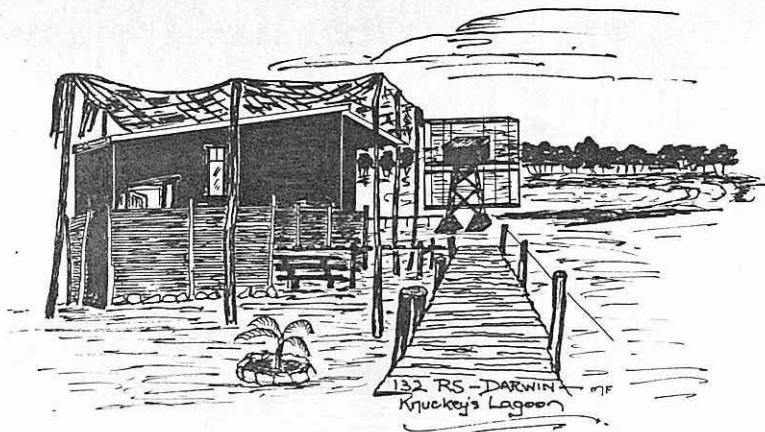
The Aborigines of the area were a particularly fine type, and much trading in shell, weapons and crafts took place to the mutual satisfaction of all parties.

The station closed in September, 1945, and was brought into Darwin on the ketch YALATA.

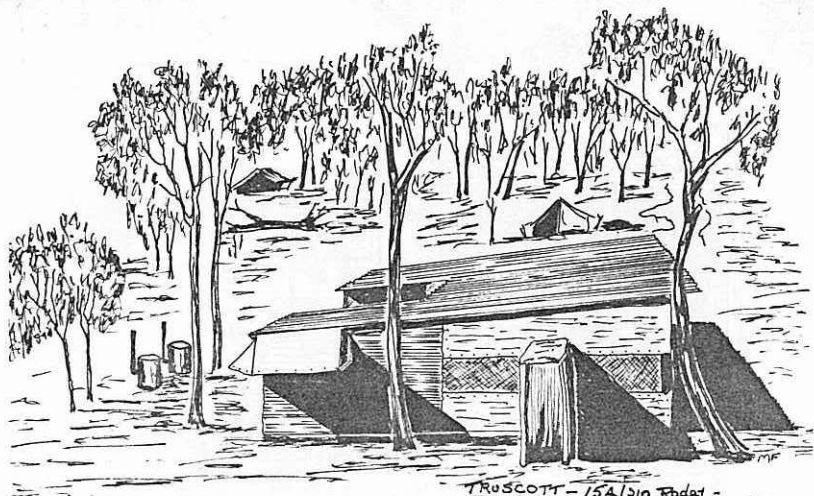


59 RS Lee Point. Certainly one of the more spectacular of Australia's 140 wartime Radar stations, the Mk. V aerial at Lee Point was somehow built on top of a giant windmill type tower, 140 feet high. While the view at the top has been described as being quite spectacular, the swaying action as the aerial inched backwards and forwards, particularly in a strong wind, caused many a mechanic to thank his lucky stars when at last he was back safely on Terra Firma.

The Receiver and Transmitter rooms were built within the tower, but down on the ground - and the mechanic on duty climbed the steps to the aerial motor at least once each shift. A story tells of two mechanics up on top attending to the matching and phasing in the early days when an enemy aircraft actually flew around the mast, with mechanics and pilot eyeball to eyeball. No doubt the pilot was convinced in his own mind that no Radar could possibly be built on top of such a structure. Anyway, the mechanics, and the aerial mast, were not attacked.

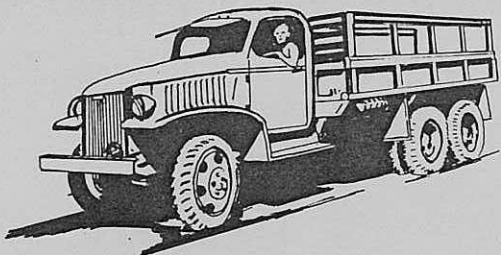


132 RS at Knuckey's Lagoon was the GCI station responsible for Darwin's defence - but during its service life, it was to be completely replaced. The first station, which effectively and successfully controlled the fighters when the raids were on, was an English mobile station with Mk V GCI mounted in Crossleys. In March 1944 this was replaced by a large RWG/GCI housed in a very stark black 2 room Doover - quite roomy and even cool at times when the air conditioner worked. (The cooler was for the gear, not the comfort of the men!) The hard working mobile gear was then renumbered 150, and moved down to Adelaide River. The newly equipped station then became quite a Darwin showplace, with many visitors anxious to view the marvels of modern Radar. Outside, the station surrounds were camouflaged as a race-track - and the lagoon provided a never ending display of birds and animals, particularly at dusk. The building was on stilts, with access by catwalk in the wet season. The Caterpillar diesels were located near the guards' camp, in the bush where the catwalk ended.

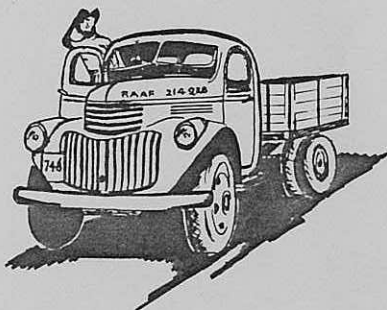


TRUSCOTT - 154/319 Radar -
the Mess, Kitchen
- Canteen

154 RS and 319 RS. The Men's Mess. Invariably the social and work centre of the camp - particularly so as usually there was no Rec. hut in a Radar camp. The gong summoned the men to the Mess at meal times where the cook and his assistant presided at the hatch or serving table. Tinned fruit for dessert at lunch - plenty of bread and jam at tea time. In the corner, the canteen opened a couple of times each week - and sometimes the tables were cleared for a social night or church service. Outside were the half drums - hot water and cold, for washing and rinsing the plates or dixies. At 154, the Mess was built of native timber for the frame, walls of sisalkraft and mesh and a black iron roof. Plenty of fly wire kept the insects away, assisted by a flyproof tunnel entrance. That was the idea, anyway.



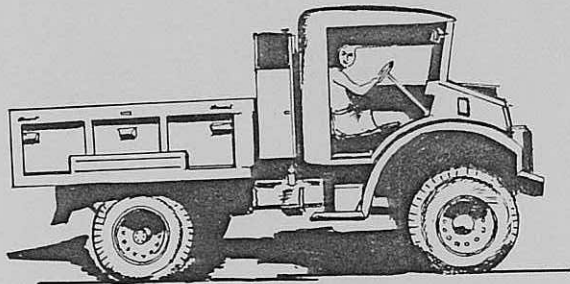
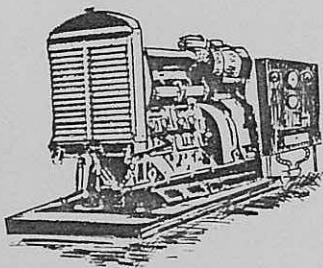
Above. The big GMC transport.



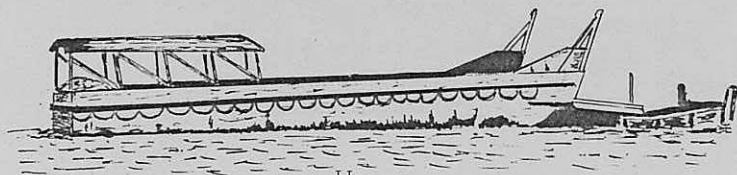
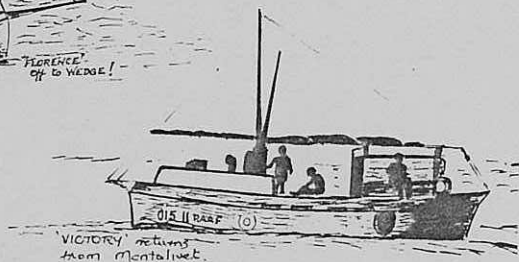
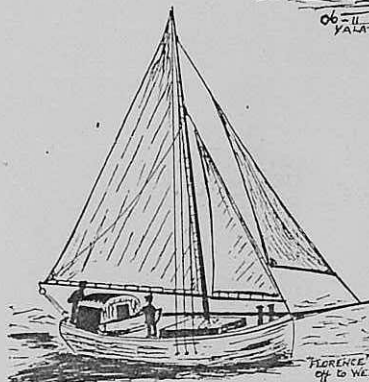
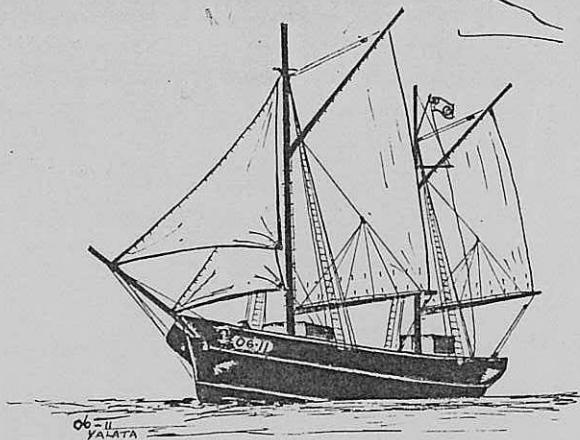
Centre Left. The work truck.

Centre Right. The Lister.

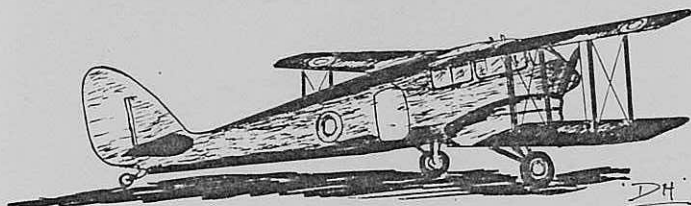
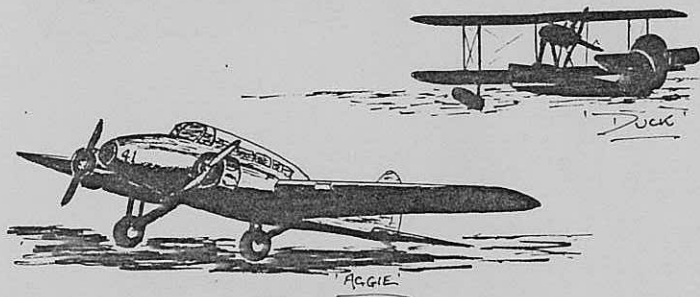
Bottom. The C.O.'s Buggy.



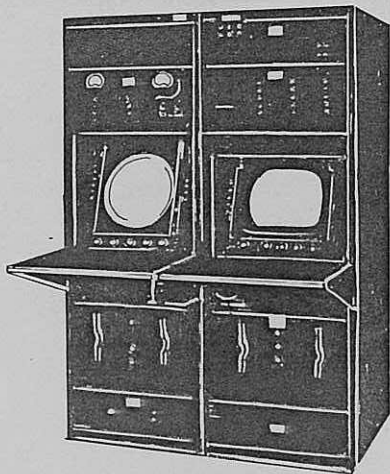
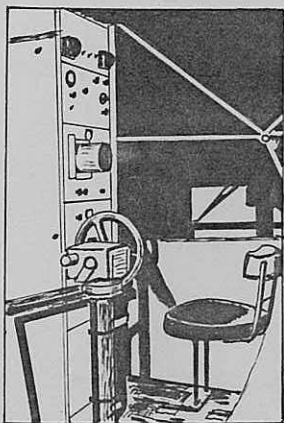
MOVING FROM STATION TO STATION, BY BOAT OR PLANE.



MOVING FROM STATION TO STATION, BY BOAT OR PLANE.

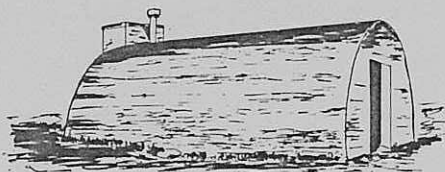


AROUND THE DOOVER.

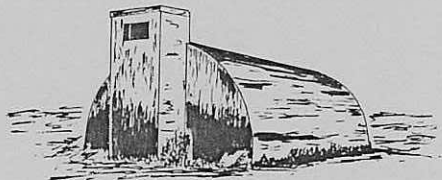


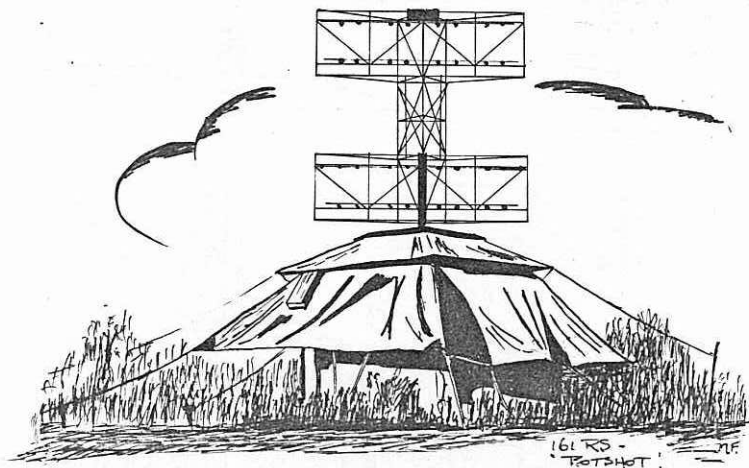
Mk V COL.

LW/AW.



The concrete
igloo doovers
of the ACO.

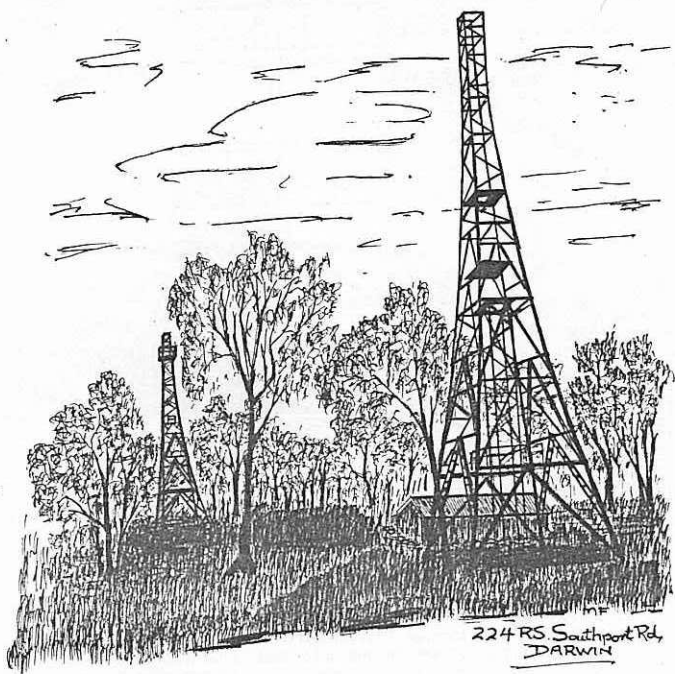




161 RS, Adelaide River, Truscott, Potshot and Exmouth. This LW/GCI Mk. I unit could hardly be called the lucky station. It was formed at Richmond in December 1943, and after first moving by rail through Brisbane and Townsville to Mt. Isa, the men and gear were loaded onto semi-trailers, then it was on through the dust to Larrimah, and on to Adelaide River where the gear was to be tested, only to be flooded out by the rising river.

On again by air to Truscott, the secret air base being built in the Kimberley area where a nervous Ack-Ack gunner took a few shots at them as they landed. No sooner had the station found a possible site than it was moved again by air to Potshot, at Learmonth, W.A. One more move and the station was located out on claypans near the extreme end of the peninsula where it was destroyed by fire while becoming operational. So the men who had become so used to packing and moving an entire station came back to Darwin without one.

Eventually after reforming and being re-equipped, the new 161 RS saw service at Morotai.



224 RS. Southport Rd.
DARWIN

224 RS at Darwin became operational in April 1944, and was the only ACO station in the North West Area. The station was particularly effective in penetrating the frequent storm activity in the tropics because of its high frequency band radar.

The versatility of the operators was tested to the full when operating the ACO's, as the method was entirely different to those stations with a revolving aerial. The maximum echo return was achieved by turning a goniometer, or control knob, from which the bearing was also read. The operator had to be particularly wary of reciprocal bearings which could easily occur when the same echo appeared strongly again 180 degrees further on.

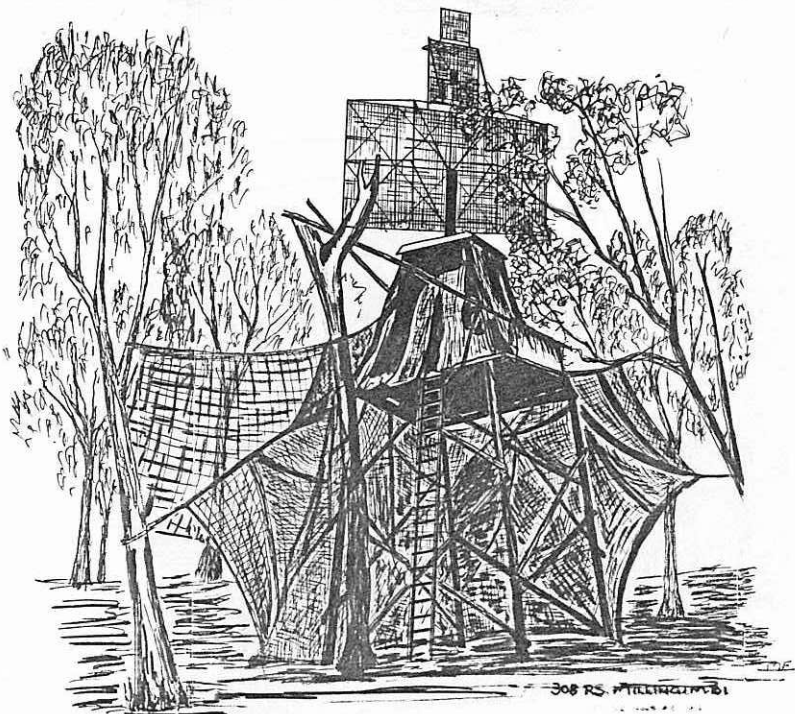


301 RS. SIDOR - The Engine Room

301 RS Sidor. Ford 5 KVA's were the usual power source for the LW/AW's, with two Ford 10's forming the basis of the generating units. These small motors performed astonishing feats of endurance at times, and in turn were serviced and maintained in remarkable fashion by the station Fitter/DMT's when spare parts were difficult to obtain.

An entire Radar camp could be powered by the output of these small units. Larger camps were equipped with Ford V8's, Lister Diesels and even Caterpillar Diesels.

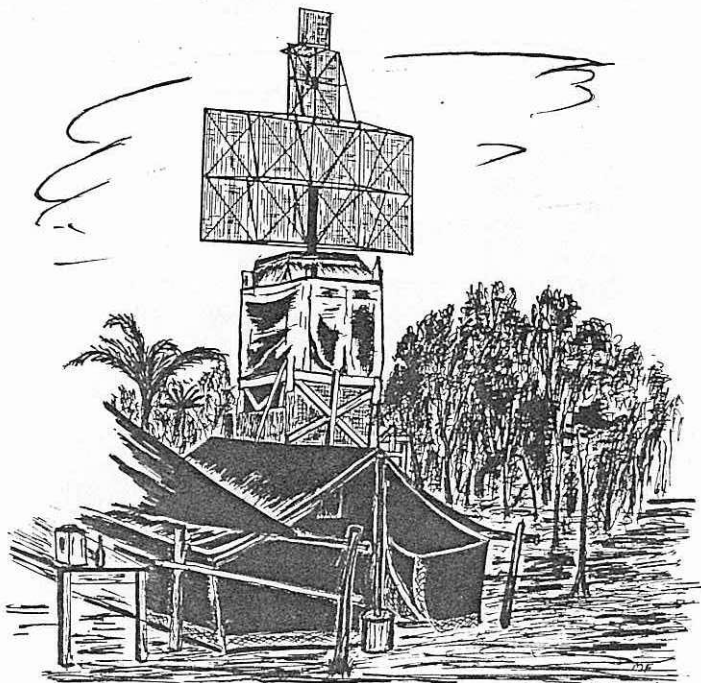
At Sidor, the engine room, or generator hut was constructed in native style, so giving the power units good protection. Of necessity at some stations, the little Fords were left exposed to sun and weather, protected only by their steel casings.



308 RS Millingimbi. The station formed at Mascot in December, 1942, and by April 1943 was on watch at Millingimbi where an airstrip had been cleared and levelled by the Mission Aborigines, a strategy which was employed at several of the native missions in the N.W.A.

At first the Doover was erected in conventional fashion near the crossover of the two strips, but apparently in an attempt to improve the station performance, a timber tower and platform was constructed by the C.C.C., and 308 became somewhat more airborne than the usual LW/AW.

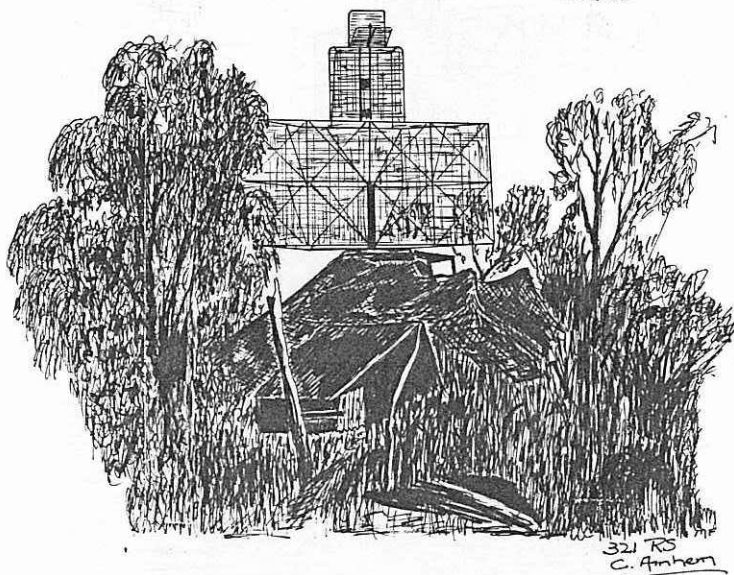
The station afterwards saw service at Tarakan.



320 RS TORAKINA

320 RS Torakina. The unit first became operational at Mitchell River in Queensland; then in January 1945 the unit re-formed and embarked at Townsville for service in the islands north of Australia.

At Torakina, Bougainville, the LW/AW gear was floated ashore and from there it was taken to Puruata Island in Torakina Harbour, and was mounted on the upper platform of an old Japanese observation tower, the previous owners no longer requiring it. Doubtless the idea was to improve the performance of the LW/AW and to increase the range. The operations room was set up in the lower part of the tower, from where a ladder was climbed to enter the Doover.

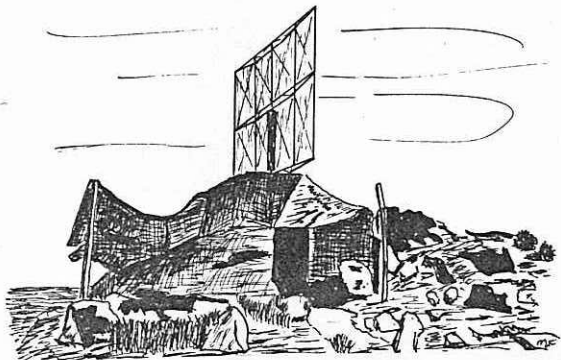


321 RS Cape Arnhem. This station was typical of the LW/AW units in the N.W.A., with an excellent record from the time of its first plot in July 1943 to its final report long after the war had ended in January 1946.

The Doover and camp were on Cape Arnhem, close by the Yirrkala Mission, and the Aborigines regularly made their camps on the beach in front of the mission and the Radar station.

A close co-operation between the Gove strip and 321 kept the control tower well informed of aircraft tracks, movements and arrivals; and as the Venturas of 13 Squadron ran a courier service from Gove to Morotai, and the Catalinas of 42 Squadron also operated from Melville Bay, the Radar station became very effective as a watchdog for the airstrip controllers.

Quite a well organised sporting programme was enjoyed towards the end of the war, and all the advantages and amenities available to the personnel of the large air base were also enjoyed by the men on 321 Radar.



325 RS
Corunna Downs

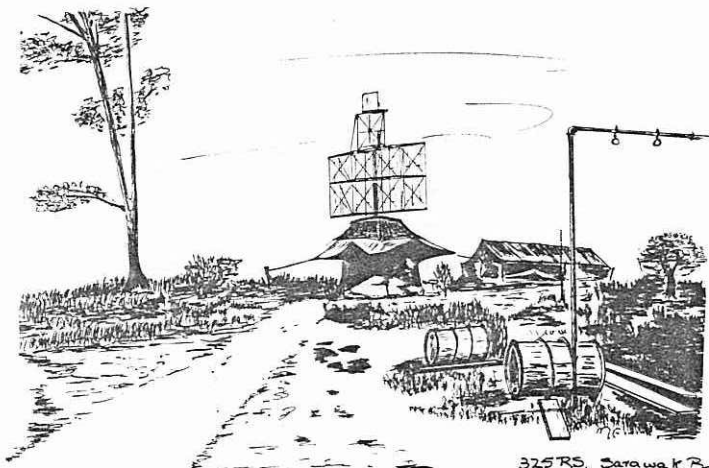
325 RS Corunna Downs W.A. and Miri, Sarawak, Borneo.

For eighteen months, the personnel of 325 endured the extreme heat and harshness of the inland country near Marble Bar in W.A.

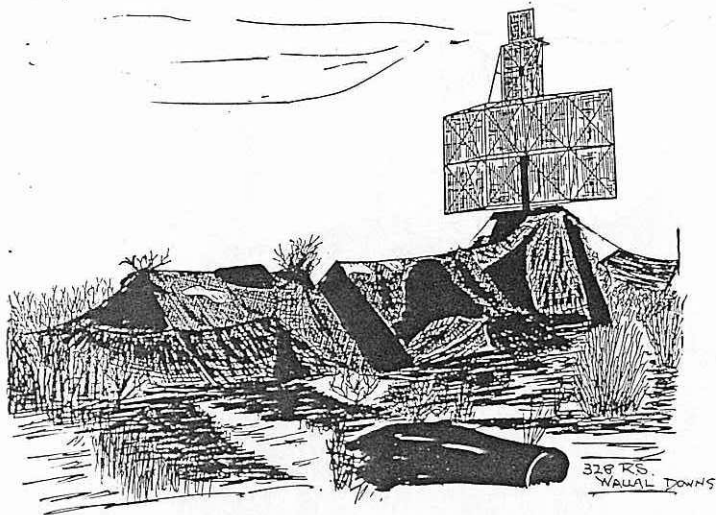
The unit had formed at Mascot in May 1943, and went on air in late July, watching and tracking the Liberator bombers of 25 Squadron at Corunna, a task which formed the most significant part of 325's operational life.

After a short spell at Guildford in January 1945, the unit moved to Queensland to embark for Morotai, becoming operational again at Lutong, then at Miri in Sarawak, Borneo.

Six weeks later the war ended, and 325 packed again to be disbanded then back to Australia in November 1945.



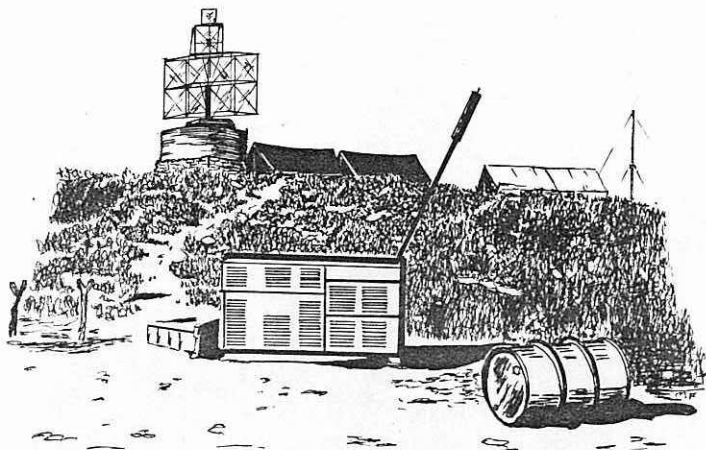
325 RS, Sarawak Borneo



328 RS at Wallal Downs in Western Australia was typical of the stations along the North West coast, from North West Cape to Cape Leveque, and beyond. The harsh country, rough living conditions and the fierce heat were endured with a remarkable tolerance, well described by Allan Ferguson in RADAR YARNS, p. 135.

But it's the description of the 'creepy crawly beasties' which brings home the point and realisation of how foreign and intrusive these stations were in the environment of a virtually uninhabited area, where even the centipedes - millions of them - treated the new comers as 'fair game.' Doover, beds and bedding, tents, toilets, not to mention the private parts of many a male anatomy - the place was alive with them.

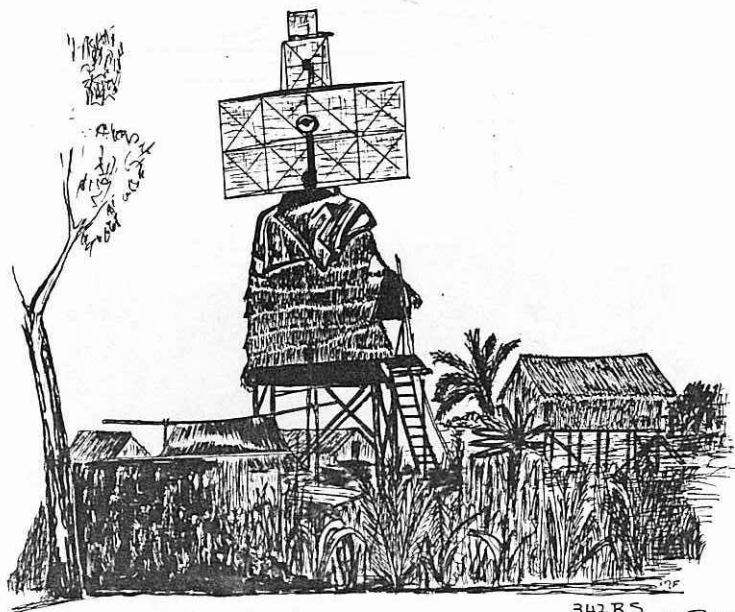
And if the centipedes ever missed a turn, the scorpions were more than willing to have a go!



329 RS Warricarran was one of the four LW/AW stations which formed together at Mascot, moving then by rail to Perth and on to Broome before moving to its appointed site at Warricarran.

The station location could hardly be called attractive in any way - it was a harsh location with little protection from the sun and weather.

The Doover was set up on a small hill, and was camouflaged by the shell of a large water tank - and the small Ford generators were in the open, but shielded by weatherproof steel casing.

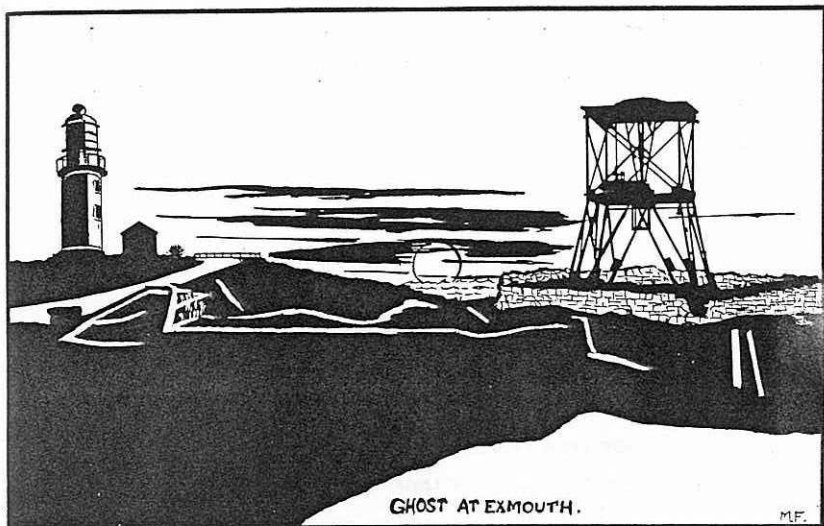


342 RS
Eilanden River.

342 RS Eilanden River. On the scale of hazardous and uncomfortable Radar stations, 342 would be in the very top bracket - and it achieved that distinction quickly! Within 7 months of forming at Mascot in November 1943 and trying out the equipment at Mt. Spec, the unit was on a barge heading towards the Eilanden River area where the gear and stores were landed on a swampy site, in enemy territory, and among arrogant headhunters and crocodiles. The place was an Army outpost, west along the coast of Dutch New Guinea from Merauke - and on 15th. June 1944 the first plot - at 100 miles - was taken.

After a few weeks, the decision was made to improve the performance of the set, and of course the considerable work involved was carried out by the men themselves. The LW/AW Doover was lifted to a platform on high timber poles cut from a stand of trees downriver, and floated to the station as the tide flowed in to the wide river. Further hard work ensured the the camp huts were also lifted above high water mark by building them up on stilts.

The Army men suffered losses while continuing their observation work and testing enemy strength, but the war moved away from the area, and 342 was recalled to Queensland in February 1945. In May, the unit embarked at Brisbane and headed through Morotai to Labuan, Borneo.



The 'Ghost at Exmouth.' 310 RS was destroyed by a cyclone early in February, 1945, and although operational almost immediately with new light weight equipment, after 50 years the skeletal remains of the old control tower still stand close by the Vlaming Head lighthouse at North West Cape. Strangely, the ghostly skeleton is an unofficial memorial to Australia's most recognised station - 31 RS at Dripstone - for sometimes the radar station was known as 310 RS and sometimes as 31 RS.

After the devastating cyclone, the station was quickly re-equipped with an LW/AW and was back on air again on 20th. February. The unit eventually saw service at Morotai in 1945, but the records also reveal that a station was located at Exmouth in 1946 where it was able to watch for the Lancastrian aircraft then flying on the route from England. The 'ghost' does not mind being photographed, and today is very popular with visitors, particularly older Radar veterans!

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