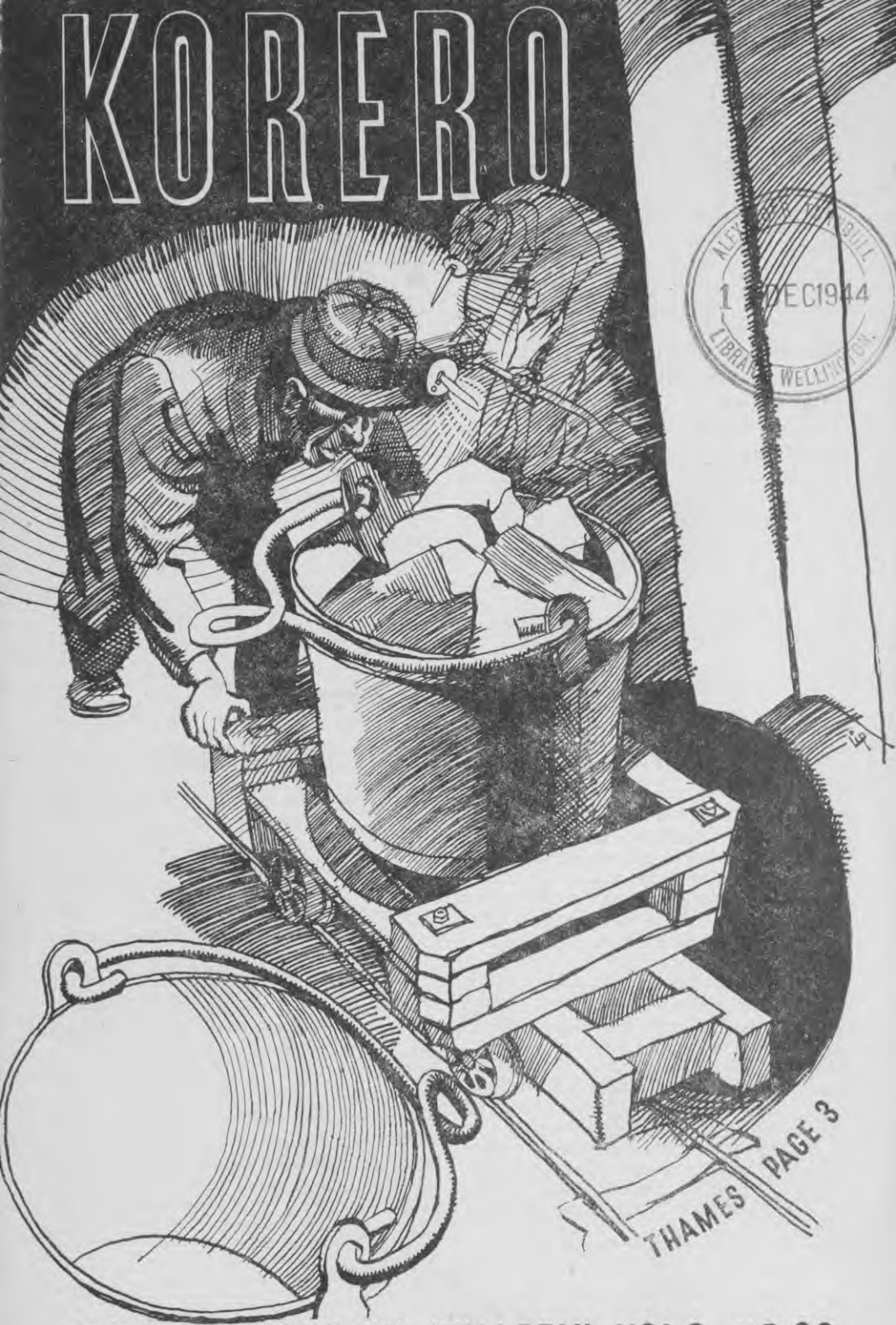
KORERO



AEWS BACKGROUND BULLETIN VOL 2 NO 22

VOL. 2, No. 22 NOV. 6, 1944

KORERO

£25 IN PRIZES

Korero's Competitions for Writers and Artists

"KORERO" INVITES all men and women of the Navy, Army, and Air Force in New Zealand and overseas to submit contributions for its first issue in April, 1945.

Prizes totalling £25 are offered in two classes, and entries not winning a prize may be published at usual contributors' rates.

Here are the classes :—

(1) Short story or descriptive sketch in prose—up to 2,500 words on service life at home or overseas, humorous or not. If dealing with active service operations, must have C.O.'s sanction. (If possible, sketches should be accompanied by suitable photographs, though these will not be taken into account in the judging.) First Prize, £7 10s. ; Second, £5.

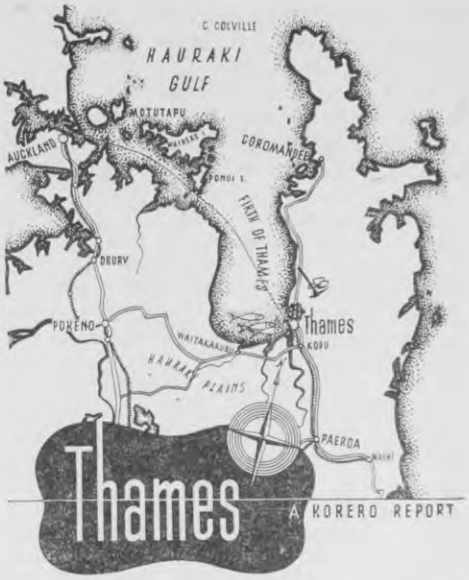
(2) Drawings in any of the following mediums showing service life : pencil, woodcut, linocut, line and wash, wash, line. Maximum size, 10 in. wide by 7 in. ; smaller drawings in same proportions. First Prize, £7 10s. ; Second, £5.

Forward your entries through your education services clearly marked " Korero Competition." Entries must reach *Korero* by March 1, 1945. Contributors may use pen-names, but must sign contributions with number, rank, name, initials, unit, and service postal address. Contributions not used will be returned. Judges' decision will be final. The right is reserved to withhold prizes if entries are not up to the required standard.

HUNTO — B.G. — AGED — HUNTING SONG, DODO—HURDLER—REACHED OVER THE FENCE AND BIT ME. No friendly nip either ; a bite with ears laid low, stamp of a hoof, rat-trap snap of teeth. Maybe a good sign for the summer season, an indication that winning the Great Northern Hurdles two years running was the idea. As a pointer to form the bite might be worth remembering ; as a welcome to Thames it, to say the least, lacked warmth. I looked at my hand and wondered where I had heard Thames was a friendly place. Hunto went back to his grass. A scow on the river, smoke from a chimney, mist over the high hills, the roads long and white, pubs and churches, houses and shops looking old, straggling. Thames, early morning. No sign of life.

So in the main street of Thames you can be bitten by a champion thoroughbred. But there is more to do than that. You can give an order for a railway engine, as many as you like, you can let a contract for a lighthouse as high as you wish. If you don't mind the wet you can go down a gold-mine at any time of day or night ; if the work appeals you can take a course at the School of Mines. If it's fishing, there's fishing. The scenery round the coast, over the hills, up the river. Or you can get lost in the history of this town, its wild tough beginnings, its progress and development. Pubs — there are thirteen of them. Churches—there are thirteen of them, too. In Thames there are a hundred things to do. But don't get any wrong ideas : there are men in blue there too : they'll cancel your driving license, fine you £25 as quick in Thames as anywhere. Thames is no larger than a hundred other towns in New Zealand, in many ways it is no different. But it has a lot more besides.

" The directors report that contact has been made with the main reef at the New No. 6 level at approximately 100 ft. below the lowest previous workings . . . According to the company's geologist the reef and country at the new low level are favourable to re-depositions of free gold with secondary enrichments likely to a further depth of 400 ft. It is expected that base metals will provide



an important supplementary source of revenue . . ."—Newspaper report of Sylvia Mines Consolidated, Ltd. (Thames). And not a newspaper report of 1874, even 1924, but 1944. Gold is where you find it. Thames is one of the places. You're not there long before you hear tales of gold, stories more brightly colourful than the metal. Tons of stories for tons of gold. They're still looking for, still finding, gold. But in these days of 1944 they're finding it in ounces, deep, wetly down into the earth. A handful of men. The one mine. Not much more than fifty years ago they were finding it by the ton. Scores of mines. Thousands of miners. Hundreds of thousands of pounds, millions.

It's a different Thames now, but gold made its beginnings, madly swung it to its feet, shoved, pushed, furiously rushed it on its way. At times, changing times, through depression and setback, knocked, jolted, breathless, it has looked back sadly for days past, hopefully for those to come. But it has never stood still for long. Soon hurrying, calmer, slower, more carefully on its way. Thames doesn't depend on the yellow value of that metal for its life these days. Security, the ways and means of living

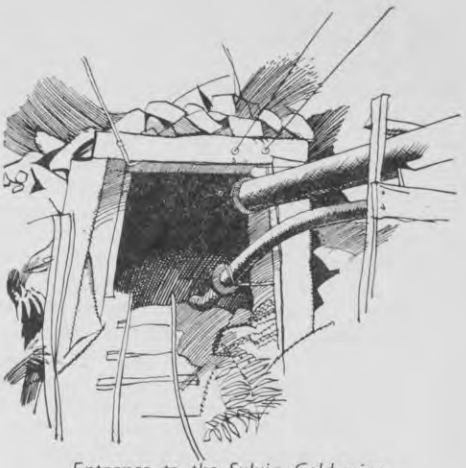
come from other sources. But that doesn't stop the conviction that there's still gold in them there hills, more gold than ever came out of them; it doesn't lessen the eager hope of its discovery.

A bush wilderness jealously guarded against pakeha intrusion by its Native owners, Thames district before 1867 was hardly known and not bothered with. Three thousand and more miners had rushed the Coromandel in 1852, arrangements had been made with the Maoris, but disappointing returns and the counter attraction of other fields in the South Island soon led to its desertion. In 1861 there was fresh activity; after two years' sluicing, metal valued at £11,000 was recovered. Death in the night, the daytime too—the Waikato War, 1863. The Maoris of the district took part, the Coromandel field was again deserted. And still no eyes, no thoughts, were turned towards Thames.

"Many men classed as labourers are starving for bread, for work that will buy that bread." It's a sentence from a report describing the conditions in Auckland during the economic depression of 1867–69. The removal of the seat of government to Wellington, the withdrawal of the Imperial troops after the Waikato War, left business stagnant; bankruptcies were frequent, unemployment figures high. Work had to be found. The Provincial Government made arrangements with the Maori landowners for prospecting the Thames creeks—£5,000 was offered as reward for the discovery of a payable goldfield. Signs of gold were found, nuggets, payable quantities. The news quickly spread. August 1 the day, 1867 the year, that the Thames district was officially proclaimed a goldfield.

Fire Bell and Siren.

Five bob with a pint of beer thrown in. That was the cost of the trip by steamer. Decks were crowded, a ship a day wasn't enough. The rush was on.


Entrance to the Sylvia Gold-mine.

Disappointment was the first reaction, dissatisfaction the second. On the first few days prospectors returned from territory which has since made fortunes, wanted back the £1 they had paid for their mining rights. The blocks of land in which prospecting was allowed by the Maoris were limited; in the early days the commissioner of the field, his assistant, and two policemen were kept busy investigating Native complaints, bringing back from forbidden territory the trespassers who were not satisfied with what was available. Quarrels broke out, at times a serious disturbance was feared. But gold was trickling in.

Within three years there was a population estimated at 20,000. Fortunes had been made—and lost. Canvastown, the hundreds of bell-tents, had been replaced by wooden buildings, by houses that were dismantled in Auckland and re-erected in Thames. Companies had been formed, the capital found, mining tramways, roads, and wharf accommodation provided by the Provincial Government. In 1868, 11,585 miners' rights were issued; in 1869, 9,438; in 1870, 33,296.

Some of the returns were phenomenal. The Caledonian, the mine to make the richest strike, crushed thousands of

ounces from its quartz and in one year returned more than £500,000 to shareholders. Nearly two hundred claims were yielding gold; in the Thames of those days it was impossible to get away from the rumble and thunder of batteries of crushers. The greatest bonanza of the field and one of the richest of all time was the amazing patch worked by the Caledonian, Golden Crown, and Manukau mines. They produced wealth that made the Thames world famous. Many of the other claims were not so lucky: the gold they found wasn't enough to pay for the axle grease of their trucks.

But those days are gone. The days of the ninety-one hotels: nearly all of them concentrated on bar trade only, and a roaring trade it was. The days of the week-ends when the miners came into Thames from the hills, the bachelor dandies in their Sunday-Saturday-night best of check shirts of flaming colours, moleskin trousers, wide silk sashes, broad-brimmed felt hats. The days when the streets were not wide enough for the milling, jostling crowds; when theatre managers knew Thames with its Theatre Royal and Academy of Music as the most profitable show town in New Zealand. The days when a lynch-hanging was cancelled only after there had been tension on the rope, the sentence commuted to a severe flogging. The days when shares rose in value to more than £200; when the sharebrokers at Scrip Corner used to walk up and down the streets crying out the shares and their prices. They did good business. One coalheaver on the wharf, tired of his job, decided to try his hand at brokerage, Commission the first day netted him £20. He bought a "ready reckoner," decided to settle down to the job. He died worth £20,000.

But those days are gone, most of the early pioneers with them. The population of Thames district has dropped from about 20,000 to 8,000 and of Thames Borough itself to 4,200. To-day riches are poured out in another and more stable form—the produce of farm and field. What was once largely swamp land has become rich fertile soil.

The two hundred square miles or more of the Hauraki Plains were once mostly under water, a vast swamp; the small blocks of land free of water were always in danger of flooding when the rivers broke through and over their low banks. Had there been purchasers this land could have been bought at one time by the acre for the jingle of pennies. But there weren't. Now it is as valuable as any farm country in New Zealand; for one slice of 100 acres there were no fewer than 350 applicants. The greater part of these acres of wetness—the Piako Swamp it was called—has been

Main Street.

drained and dredged, at first by private enterprise, later under Government direction.

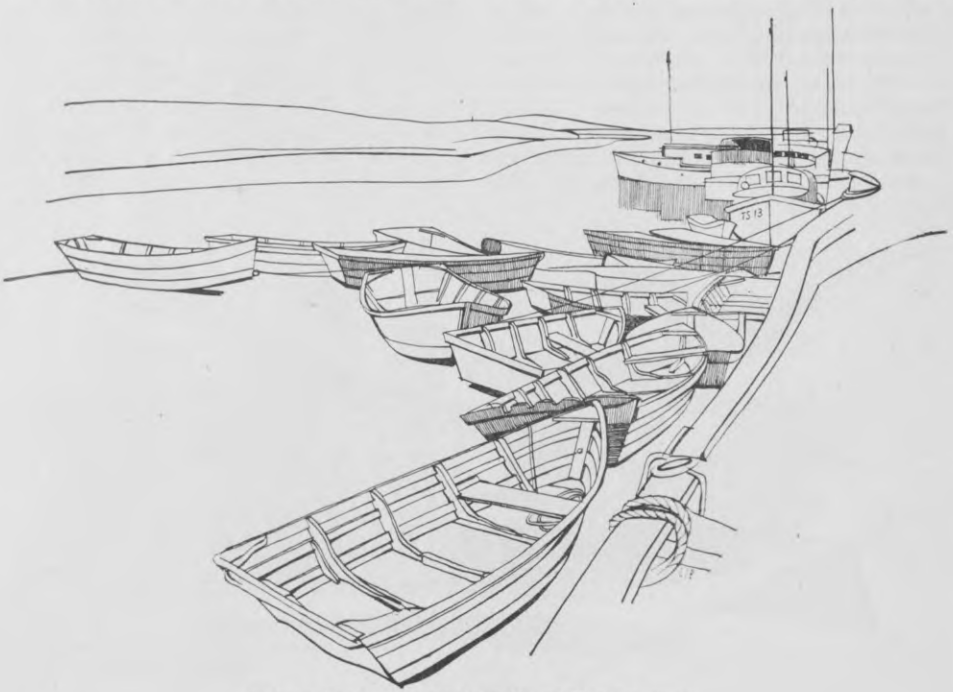
Hundreds of thousands of pounds went down the drains—the drains, miles long, that carried the water away to leave this reclaimed land capable of returning highest-quality produce. Thousands of acres of rich alluvial flats have been drained, roaded, fenced, and subdivided into farms and reserves. So well has the water been removed that in many cases it has been necessary to sink wells for household and farm use.

Gold bumped Thames on the map; the richness of the Hauraki Plains has kept it there, its value no less than that of the metal. And as the boom town of Thames was the natural outlet and centre of the seventies, so now is it the outlet and centre of these farm lands.

To-day, at least through most of the district, the sheets of water, the stout kahikatea and the white-starred manuka, the oozy wilderness of ferns and rushes and flax, have been replaced by white dusty roads, fencing wire and rails, blue-gum trees, flocks and herds. Dairy and cheese factories are dotted over the plains, cream-cans stand at the farm gates. And those squat buildings clean in the morning sunshine are shearing-sheds, wool-stores. It's wonderful grazing—nothing could be better to fatten the cattle, nothing could be better for the horses.

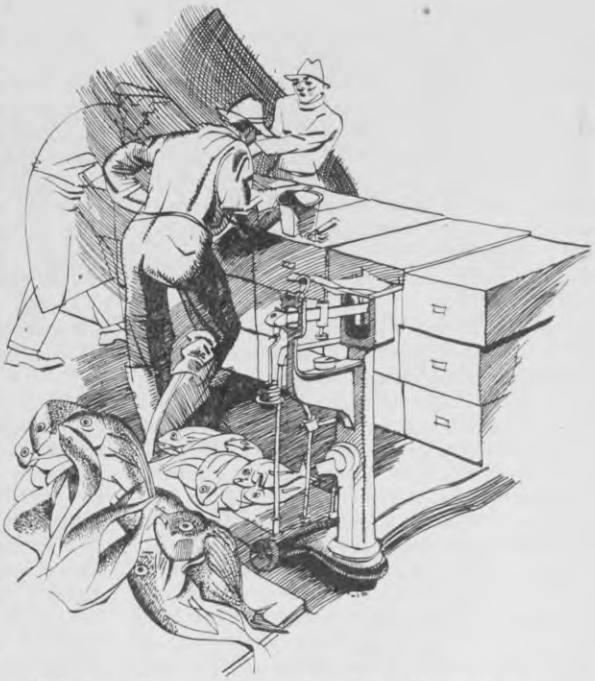
Growing of fruit in the district is profitable because of the climate and the soil. All classes of fruit, including lemons and grapes. And apricots. It's a funny thing about apricots: Thames is the only place in the Auckland Province where the trees fruit successfully; in other districts, even at Coromandel which is only a few miles north on the same coast, the trees produce enormous growths of wood but very little else. Nobody quite understands the reason—must be something to do with the soil.

You wander slowly in the September sunshine of the Thames main street. Lots of people now, and they're not



Fishing boats and dinghies lie in Thames river.

hurrying either. A youth passes with a rifle at the trail, a sugar-bag on his arm, a dog at his heels. Probably rabbits in that bag. It's easy to see horse-shoes are more plentiful than tires and petrol. There are lots of horses in Thames besides Hunto; they mightn't be as fast, they're certainly more shaggy, but at least they're friendly. Steady, sure-footed, they don't mind the steep hills: one shepherd's horse could turn on three-pence, and he didn't mean six-pence. More dogs than horses though, and they find the centre of the main street as comfortable a place as any to sleep in the sun. Lots of shops, country shops; and if you're from the city you find it strange to see the latest fashions in hats and frocks in one half of the window, saddles and axes and spades in the other.



Fish from Thames is sent all over the North Island.

It's strange, you think, that in a small country centre like Thames you have two foundries as large, as busy, as modern as most in New Zealand. Thames must be low in the list of places you'd think likely to make heavy railway engines, huge cast-iron lighthouses, or, in some cases to their own design, steamship engines. Boilers, giant timber-haulers, and stone-crushers are just a matter of course. Two hundred men are employed, both firms are kept busy—the last years to a great extent with munitions contracts. Both firms, too, have been established for more than seventy years. And the dates of their establishment give you the answer to your wondering—1869, 1870. Gold-mining days. You remember the stories of the batteries of crushers needed for that quartz. Here is where they were cast. Business increased, the shops were gradually added to.

With the decline of mining in the district, the firms' work turned in other directions. One shop specialized in the manufacture of sawmilling and bush-working machinery, log-haulers in particular. Some of the largest kauri trees ever felled in New Zealand were from the Thames. Locally made haulers were large and powerful enough to bring out quickly whole trunks long distances over rough, tough bush and hill country without the construction of miles of expensive tram-lines. One of these haulers proved its strength at the Billy Goat, Kauaeranga Bush (not many miles from Thames): for nearly a mile down a grade of 1 in 3 it lowered at one time loads of from 6,000 ft. to 10,000 ft. of timber.

The foundry managers say there is little disadvantage from their apparently isolated position. Scow, railway, and truck provide fast, frequent transport; a rush job can be delivered from the foundry to Auckland in less than two hours. The modern tendency, especially since the war, has been for manufacturing concerns to transfer and expand their premises to the country. The two foundries at Thames were seventy years ahead of the times.

Thames is a friendly place. Hunto's welcome gave quite the wrong impression. And it's a happy place. The even quietness of that town would not easily be disturbed. Once the townspeople and the boot-repairer had differences of opinion about prices and quality and the like. But there were no black looks or angry words. There was little said at all: the young men of the town simply didn't wear any shoes or boots for a week. It was summer and they padded round the streets with feet bare. The hot pavements made no difference. On Saturday night they dressed with usual care for the pictures; navy blue suits were as neatly pressed, white collars as stiffly starched, hair as carefully brushed. But the ban, this movement of protest, had not been lifted, they went to the pictures without shoes. It wasn't long after that the shoe-repairer left the town.

One small boat, two men, a few hours, two hundred and fifty-four dozen snapper. Estimated return—£80. Not a bad day's fishing, and with £80 in their pockets they wouldn't mind if the catch the next day wasn't as large. It's a pile of fish, but the Firth of Thames can spare them; these days, especially, the public can use them. It's one of the profitable industries of Thames.

Three freezing companies make a lot of ice, work hours of overtime. The labels on the crates in their packing-rooms surprise you: all over the North Island down to Wellington orders are regularly sent. That packing is simple enough. The fish are taken from the cooler, cleaned, weighed, and flopped into the boxes. A thick slab of ice is broken over the top. Four smacks of a hammer, the lid is on. She's all set to go.

Many of the trawlers of the peacetime fishing fleet have been serving since the war as minesweepers. That explains the general shortage of fish in city shops; it explains why crates from Thames have labels for places so far away. These days the price of nets is high, the cost of running and manning a boat is high, but the price of fish is high, too. Returns are good. Snapper in the winter, snapper and flounder in the summer—they make the main catches. Crayfish and sharks are good side lines (these sharks do make holes in the fishingmen's nets, but not their pockets: the new industry in New Zealand of processing fish oil has made the price for shark livers high enough for the net-mending not to matter so much).

If you don't wish to be bitten by more than Hunto there's one thing in Thames to be careful about, not to be too curious over. It's the Thames deep-water harbour. They spent £66,000; they built a new wharf, approaches to that wharf, a railway siding, tide walls, they dredged and they dredged. They did everything, in fact, but get a deep-water harbour, even a shallow-water harbour. Unexpected difficulties came to light from that sea. The scheme had to be completely abandoned. But the money had been spent. It's a sore point. Now they haven't a harbour at all except for the small wharf on the river where the scows and fishing-boats slip in over the mud with the 5 ft. of water at high tide.

Three days it's been since we came with the scow "Pono" out of the night to find Thames sleeping in the grey light. It's been pleasant, it's been interesting, we've liked the peace and quiet of the sunshine, the people, the way they live. There may still be gold in those rugged hills, but the brightness of colour that we see is the hot flame of gorse—gorse which has been spreading dangerously since the wild goats have been shot from those hills. It's a nuisance, but it's beautiful. One day we'll come back to Thames. There's a lot we haven't seen, a lot we want to do. And from that little town nothing could be better than taking one of those horses from the hills to see some more of the Coromandel Peninsula. Cabbage Bay, Gumtown, Slipper Island, Shoe Island, Kikowhakarere Bay, Castle Rock—we want to make sure that those names on the map are as attractive as they sound.

AGAR·AGAR + a sticky business

A KORERO Report

AGAR-AGAR — agar for short — is a vegetable gelatine. This fact may not appear either interesting or spectacular, but the story of its development in New Zealand is typical of the way science has come to the aid of industry to defeat what might have been a paralysing shortage.

You may have seen on a packet of jelly crystals the warning, "dissolve in hot, but NOT BOILING, water." Jelly crystals are made from animal gelatine, extracted from certain slaughterhouse refuse, and animal gelatine cannot be guaranteed to set, or "gel," after it has been boiled.

However, in canning meat the contents are put into the tin at boiling heat and under pressure in order to ensure that all germs have been destroyed, and where gelatine is required it must be able to stand up to this temperature without losing efficiency. Have you ever noticed the translucent jelly that surrounds the contents in a tin of canned tongues? This is agar, put in at boiling temperature, and setting as the contents cool. Incidentally, ordinary gelatine would not remain set under tropical conditions, and a tin of tongues would become a cold stew.

There is another use for agar, one even less generally known, but nevertheless one of great importance. When a bacteriologist is on the track of the germ that causes a disease, he must have some way of growing colonies of these germs in order to study their habits. These colonies of germs are called cultures, and since they are hardly the sort of pets one can keep in the back yard, they must be grown in some suitable medium. Gelatine is ideal for this purpose, being translucent and practically colourless, as well as providing food for the growing germs. But, before growing the cultures, the bacteriologist must make sure that there are no stray germs already in the medium—in other words, he must sterilize the gelatine, which is most easily done by boiling it under pressure. For this reason culture media are generally prepared from agar. The vaccine on which the health of armies may depend owes its preparation to agar, as do certain sera for innoculations.

So far, so good, but here arises the difficulty. Before the war, practically all our agar came from Japan and was, moreover, a costly substance. With the outbreak of war, importation of agar naturally ceased, and there appeared to be no other sources readily available.

At this stage a representative of the meat-canning industry suggested to one of the universities that possibly one of its students interested in research might care to look into the agar problem. However, when the university came to consider the problem it realized that some of the world's leading chemists were working on it, and that many of its secrets were still mysteries, and the

problem was hardly a fair assignment for a student. They therefore passed the problem on to the Department of Scientific and Industrial Research. The Department remembered that the Japanese obtained their agar from seaweed, and passed the problem on to its Botany Division. The Botany Division, armed with an illustrated text-book on seaweeds (technically known as algæ), went out and collected some seaweed.

Now, a matai always looks like a matai, and once you have seen a totara you can be fairly sure of identifying any other you meet, and so with most of the denizens of the plant world ; but seaweeds vary according to the depth at which they grow, the temperature of the water, the type of bottom, and currents and surges, and so on, so that three or four specimens of the same species of weed may be so different in appearance as to appear like different species. Our botanist therefore collected specimens of everything that resembled at all the ones marked in the book, took them back, and tried them out in test-tubes.

Agar is found at areas marked—e.g., Castle Point, Kaikoura, &c.

It was found that the most satisfactory algæ belonged to the family Gelidiaceæ, and that of this family the most suitable one was called *Pterocladia lucida*. Unfortunately, few seaweeds have common names, so it is difficult to avoid the scientific terminology. *Pterocladia lucida* is a pinkish or reddish fern-like seaweed, quite common in coastal waters round the North Island, particularly up the East Coast and in the Bay of Plenty. Finding out just where the weed grew in suitable quantities was, incidentally, a problem in itself.

At this stage a chemist from one of the meat-canneries asked why, since the extraction of agar required no special machinery or chemicals that would have to be imported, some one did not try it out. With this piece of encouragement the Department obtained half a ton of weed and set to work to try an experimental batch. For this purpose the children of Native schools in the Bay of Plenty were recruited, and with the co-operation of the school-teachers sufficient weed was soon obtained, hung to dry on the school fences, and forwarded to the Department.

The results were most encouraging, and the problem then became one of collecting the material on a commercial scale and of finding a firm to undertake the manufacture. A certain amount of negotiation about prices, a small advertising campaign, and the weed began to come in. Native schools again helped, and the fact that the children invariably sent in the right weed showed the feasibility of the scheme. Then School Committees and parents began to realize that the additional £5 or £10 added to the school funds came from seaweed, and gradually the idea of money from seaweed spread. The coastal Maoris in particular were enthusiastic ; a day's picnic by the beach, unlimited swimming and skylarking in the water, and finally a cheque. Kapai ! The local storekeepers saw money coming into their districts, and assisted ; school-teachers co-operated. The *School Journal* lent itself to propaganda, and the weed began to roll in. Some of it came in sacks, some was pressed into wool-bales, some had been pressed and baled in hay-balers,

but there was very little rubbish or foreign matter among it, and very few people had sent in the wrong weed.

Meanwhile preparation was going ahead for the extraction of agar. The process is a simple one; briefly it comprises boiling the weed until a "soup" is obtained, filtering off the liquid, and then freezing it, when the agar separates out. Here the business proved really sticky; on one occasion the agar "gelled" or set unexpectedly, and the experimenters found their equipment neatly set in gelatine. Ultimately, however, all difficulties were overcome and agar came on to the local market in sufficient quantities to meet New Zealand's needs.

There followed further investigation of *Pterocladia lucida* to see whether it would regenerate fast enough to keep up the supplies, or whether picking would have to be regulated. It appears, however, that, picked by the methods now in use, there will be ample weed for New Zealand requirements over an indefinite period. The possibility of other weeds being used has not been overlooked, and research is still proceeding, but so far no better source than *Pterocladia* has been found.

Up till April, 1944, over 120 tons of the dry weed had been received, the Internal Marketing Division acting as purchasing agent, and of this weight about one-quarter was agar. Since then the industry has grown steadily.

What of the quality of our agar? Tests carried out by the Imperial Chemical Institute, South Kensington, reveal that it closely resembled Saghalien strip (a Japanese product) and gave a gel strength at least twice as strong as that of the best Japanese. As a result, manufacturers are able to use solutions of as low a strength as 0·6 per cent. to give a gel strength equal to 1 per cent. Japanese solution. Biologists report also that the agar now being supplied is excellent for the growth of bacteria and fungi, giving results equal to that given by the best Japanese agar.

This, then, is the story of a combination of science and industry to overcome an urgent problem. Now that the industry has been started, it is unlikely that Japan will ever regain the market which she held for so long, which is to say that so much more money will circulate in New Zealand.

One minor incident of the research adds piquancy to the story. By a small wharf in a northern town was a meat-cannery, and over that wharf hundreds of pounds worth of expensive Japanese agar had been landed. Underneath the wharf was growing our friend *Pterocladia lucida*—agar on tap.

CONTRIBUTIONS TO KORERO

YOU ARE REMINDED that a maximum sum of £3, payable in canteen orders where there are canteens under New Zealand control and in cash where there are not, will be divided among contributors in each issue. It is necessary, therefore, that all contributors should send us number, name, and full address. Remember, too, that articles are not the only contributions we are looking for. We would like to see also short paragraphs, black and white drawings, and verse. There is space, too, for your comments and inquiries, provided you keep them short. The address is: "D.A.E.W.S., Army H.Q., Wellington." Mark your envelopes *Korero* in one corner.

FISH LIVER OIL

A KORERO REPORT

It's a fishy business. You can tell that by the smell. It meets you long before the factory manager shouts his greeting above the whirr of wheels. It's a messy business, too. One look at the cream-cans crammed with grey, black, yellow, brown, and pink livers will convince you of that. Or a glance at the electric mincer dripping out a stream of liquid liver into pans streaked with dull colours—colours like those of the layers of sand in the little bottles on grandmother's mantlepiece. But you will agree there are compensations when you watch the centrifuge pouring out rich, brown oil—oil which clears to red-gold when held in a beaker against the light.

It's the fish liver oil industry, and you find it has more than visual compensations when you hear something of its history and the uses of its product.

In fact, you begin to wonder why nobody ever thought of it before. You learn that they did, but it was not until the war endangered our overseas supply of medicinal fish oils that New Zealand had to find a home-made substitute. We found something more than a substitute. We found the livers of many New Zealand fish produced an oil far more valuable than the cod-liver oil we had previously imported. Livers which had always been wasted became highly prized. Fish that New-Zealanders normally shunned as a food became valuable for their livers. Once again it was a case of the war forcing us to find riches in our own back yard, but whereas many of our wartime substitutes are only substitutes for the original, here we have found a product many times better than the overseas article. The beneficial results, the manufacturers hope, will not be confined only to New Zealand.

Why is fish oil so valuable? What are its uses? You can find answers to these questions in a factory at Newtown, Wellington. In this factory, set back in trees and shrubs on a terrace below the Karitane Home, there is a small but well-equipped laboratory. In charge is a woman doctor who is only too glad to tell you why the new industry is so vital to New Zealand's national health. The factory produces baby foods: special mixtures which help both the ailing and the normal baby. But it is not a commercial concern. It is the outcome of the work of the late Sir Truby King, who devoted his life, his money, and his brilliant mind to improving the health of New Zealand babies. It is an adjunct of the Plunket Society, and it produces the special foods which form an integral part of the Plunket system. It makes the foods as well as possible, sells them as cheaply as possible, and uses any profits for the maintenance of its Karitane Homes both in New Zealand and overseas. New Zealand is still the only country to produce the emulsions and humanized milk used under the Plunket system. From this spick-and-span Melrose factory these products are consigned to Australia, England, Canada, South Africa, India, and many other countries as well.

We ask the doctor why fish oil is so valuable.

Her answer is easy to understand. "There are two reasons. It is a fat, and our bodies need fat. It also contains two valuable vitamins, A and D. An adequate supply of vitamin A keeps our mucous membrane healthy and guards us against colds. Vitamin D is the bone and teeth vitamin. For children it is the only safe protection against rickets."

"But," we ask, "isn't milk, with its calcium, as good a bone and teeth builder?"

A simple analogy makes things plain. "To build a wall you need bricks, mortar, and a bricklayer. Calcium (in milk) provides the bricks, phosphorus (in eggs) provides the mortar, and vitamin D is the bricklayer."

We learn, too, that, apart from sunshine, fish oil is the best source of vitamin D. There is little of this vital ingredient in our ordinary diet. Sunshine and cod-liver oil help build bonny babies, or at least provide them with bonny teeth and bones, and if children cannot get sunshine, then cod-liver oil will guard against rickets.

And are all fish oils equally valuable? Not by any means. Before the war Karitane Products imported 10,000 gallons of cod-liver oil a year. It came mainly from England and Norway. But 200 gallons of hapuka-liver oil has as much vitamin A and 400 gallons as much vitamin D. This means that our own groper, plentiful in New Zealand waters, contain an oil with fifty times more vitamin A and twenty-five times more vitamin D than the cod-liver oil we previously imported. Ling is next in value, and then comes the previously despised shark, which produces an oil high in vitamin A and, because of its size, a lot of it. Kingfish and barracouta also have valuable livers, and though the factory processes cod livers, it prefers the others because of their better quality.

How long have we known the health-giving properties of fish liver oil? For centuries; but up till twenty years ago the usual method of extracting it was to rot the liver in the sun and collect the oil that remained. A high time must have been had by both manufacturer and patient.

This knowledge that the smell is better is small comfort when you get your first whiff of the Island Bay factory. Even though the livers arrive frozen hard, and are salted down and kept in a freezer, there is a fruity flavour to the air both inside the factory and out. But you get used to it, and in no time are interestedly watching the manager show you the difference between the liver of a shark and a hapuka. You notice, though, that he hurries to wash his hands.

The manager explains that when the war began Karitane Products had good stocks of imported oil and it was not until 1943 that the factory was started. In eighteen months it has produced more than 10,000 gallons of oil and has exported 5,000 gallons to the Ministry of Food in the United Kingdom. The manager tells you New Zealand will never again import fish liver oils. In fact, she will be able to help less fortunate countries if the supply of our raw material remains plentiful.

The factory was built at Island Bay, the harbour of Wellington's fishing fleet. More livers were needed than Wellington could supply, so a drive was organized

Examining the Livers.

among fishermen from as far south as the Bluff to the northern boundaries of Wellington Province. They were offered 1s. a pound for what they had previously dumped in the sea. Now the cream-cans come in from all parts of New Zealand, their contents frozen hard, for it is essential to keep the livers fresh for the best-quality oil. An Auckland factory handles the northern trade, but the Island Bay concern gets enough to keep it busy, and hopes for more than enough when the war releases both trawlers and fishermen for the fishing fleets. Half a ton of livers a day is their present maximum, but additions now in progress will treble the weight the factory can handle.

The size of fish livers varies. Hapuka, dogfish, kingfish, and barracouta average from ½ lb. to 1 lb. The ling liver weighs from 2 lb. to 3 lb., but the shark varies from 5 lb. to 50 lb. One yielded an 84 lb. liver, which is an all-time record and likely to remain so. Other fish livers are accepted, mainly to keep the good will of fisherman; they are treated to produce an oil of high value as a stock or poultry food.

The livers are first sorted, washed, and finally minced into a large pan. Because they contain only 10 per cent. solids, the livers come from the mincer with the consistency of a thick cream. These pans are emptied into vats holding 100 gallons and the heat, direct steam, is turned on. Ling, shark, and the others are heated for two hours at 200 degrees F. Some livers need longer and more specialized treatment, and they are digested by a special process for forty-eight hours at a temperature which must remain between 110 degrees and 120 degrees. All this time an agitator keeps the stew continually moving. After heating, the contents of the vats are pumped up to an agitator pan where they are thoroughly mixed and from which they gravitate to a super-centrifuge. This machine is like a super-separator and, retaining the solids in its core, throws out the water through one spout and the oil through another. The core revolves at 16,000 revolutions a minute.

To see the small amount of solids that are left in the centrifuge makes you realize the livers are largely liquid. Only a quarter of a kerosene tin from a day's working—it makes good garden manure! The quantity of oil in a liver varies with different fish. Hapuka contains about 10 per cent.; half a ton of liver produces about 10 gallons of oil. Ling contains 25 per cent.; and shark, as well as having the largest liver, provides the highest proportion of oil—50 per cent.

The oils vary also in colour and consistency. Hapuka gives a red-gold oil, the same colour as that of the mixed inferior livers but heavier in consistency. Shark oil is free flowing and a light gold. Ling oil is a pale yellow. But light or heavy, yellow or brown, they are run off into 44-gallon drums and sent to the factory at Melrose to wait for shipment or to be included in little Johnny's "Karil" emulsion. The factory uses plenty of this liver oil—about 600 lb. of oil to every 2,000 lb. of emulsion.

The Mincer

IS UNEMPLOYMENT CURABLE?

An airman, A.C. 2 W. Rosenberg, writes the comments printed below on the A.E.W.S. Current Affairs Bulletin "Is Unemployment Curable?" While we are glad to print his letter, we must draw attention to the last paragraph of Part I, section 3, page 4, in the bulletin. This makes it clear that the bulletin was summarizing the essential points in a white-paper in which the British Government outlines a policy which will, it believes, "prevent mass unemployment from occurring again, and at the same time preserve essential liberties."

MAY I congratulate you on this little pamphlet, which is just as lucid and unbiased as the rest of your publications, which many of us here read regularly with the greatest of interest. But would you allow me also to add a few words of what you may call constructive criticism to what has been said in your pamphlet?

The argument of the pamphlet is that, apart from temporary—what we may call technological—unemployment, unemployment can only be overcome if total expenditure is kept up to a degree that it can absorb all goods purchased.

It then proceeds to analyse all forms of expenditure, and arrives at the result that fluctuations in expenditure do not primarily originate in the consumers' goods industries, but in the producers' goods or investment goods industries.

The great merit of the pamphlet, to my mind, is to have directed the attention of the person unacquainted with modern economic thought to the importance played by the investment goods industries in our scheme of things. It becomes clear as a policy formulated in the pamphlet that the stimulation of investment is the lever to overcome unemployment.

So far the pamphlet is excellent and is doing a great service. But is there not a gap in your trend of thought—not a jump in the argument? Why, does common-sense ask, is it necessary to stimulate investment if you want people to have enough to eat—when there are sufficient machines and facilities of production to feed them all in abundance?

Well, the reason for this disconnection of thought in your argument lies plainly in the complete omission of the main factor causing unemployment—viz., the existence of profit in our present form of economy. My criticism of your pamphlet is that the word "profit" is not mentioned even once. You are talking of stabilization of prices and wages, but there is nothing in the argument about the stabilization or, rather, elimination of profits.

Price stabilization alone does not stabilize profits — for owing to the existence of unused "overhead" an increase in sales at stable or even reduced prices will in the majority of cases lead to greater profits. The suggestions which you are putting forward and which may under special circumstances indeed lead to an increase in spending will finally, however, under our present system of production lead to what is commonly called "profit inflation"—in fact, this is now commonly thought to have been the cause of the great 1929 slump in America, when prices and wages had been kept comparatively stable for a considerable period but profits had risen to such an extent that prices of stocks and shares on the stock exchange tripled and quadrupled, and when it finally became clear that consumption could not keep up with rising production the whole card house collapsed, with the consequence of World War II.

Why, then, is the existence of profits incompatible with the maintenance of total expenditure? The reason is simple: while the greater part of incomes consisting of wages is spent in buying, the product which has been appropriated by the entrepreneur in the form of profits is far too large to be consumed by the recipients of these profit incomes—seeing their comparatively small number and also their frequently entirely impersonal character. Company reserves, for

instance, constitute probably the greater part of profits and they will certainly not be spent on consumers' goods. What has happened is that a vast quantity of consumers' goods has been produced, but that—so far—there is no claim for many of these goods because the recipients of profit cannot themselves spend all the money they have earned on consumers' goods.

What happens next? The owners of these "saved" consumers' goods now start to distribute them by paying wages to people in the investment goods industries—*i.e.*, by creating goods that cannot be consumed.

Therefore, as long as all savings (and that means predominantly profits) are used in the employment of people who are prepared to eat up those savings *but do not add to the surplus already in existence*, everything produced will be sold and a happy state of affairs exists as described in your pamphlet, Part V—viz., "the more people who produce things for which there is a sale, the bigger is the demand for everything else, and therefore the more employment there is. It is a sort of two-way transport system in which the inward and outward traffic balance each other."

But it should be clear from the foregoing that this two-way transport system does only work if the savings of the people are completely and regularly invested in capital goods industries. But what is happening in effect? An entrepreneur who is in business for profit will only order new machines, increase his factory buildings, buy new patents, &c., if he thinks he will be able to sell the more goods so produced at a profit in the future. Now, we have seen that the only way for this to happen is that he himself creates the demand for his products first by investing his profits and putting people to work. But the entrepreneur cannot possibly look at things from this round-about angle. He only notices that, if other entrepreneurs for some reason or other have reduced investment, demand is going back and there is no sense in him investing money in new machinery that will produce more unsaleable goods. He therefore reduces production rather—reduces his own profits—reduces the savings of society by which investment alone can be kept going—reduces employment—and then wonders what is wrong with the Government.

What is the moral of the story? Unemployment can only be cured if activities in the investment goods industries are made entirely independent of profit anticipations of entrepreneurs. Let the State build bridges and roads and public parks, machines, railways and air and motor transport, and the people employed in all these State-fostered industries will consume everything that is produced. In fact, production will never be able to keep up with the always increasing demand.

Have you ever reflected why there is that general impression of prosperity during wartime? Here you have the solution. Investment industries—*i.e.*, industries not producing consumers' goods—are run independently of entrepreneurs' profit anticipations in the consumers' goods industries. The two departments of social production are separated and the problem of "Is Unemployment Curable" has changed into "Is Absenteeism Curable."

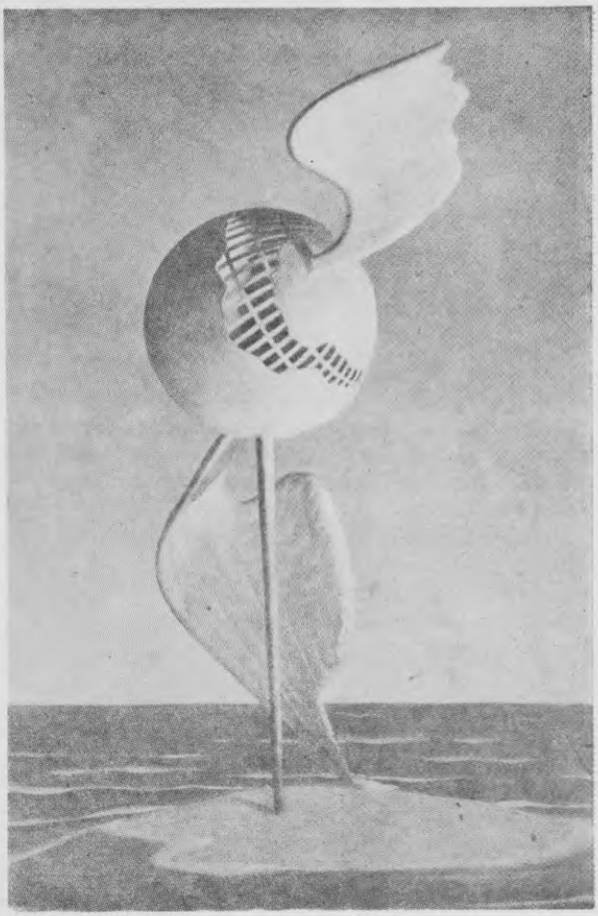
ART AND THE ARMY

By Adrian Hill, R.B.A., R.O.I. in *The Studio*, England, August, 1944

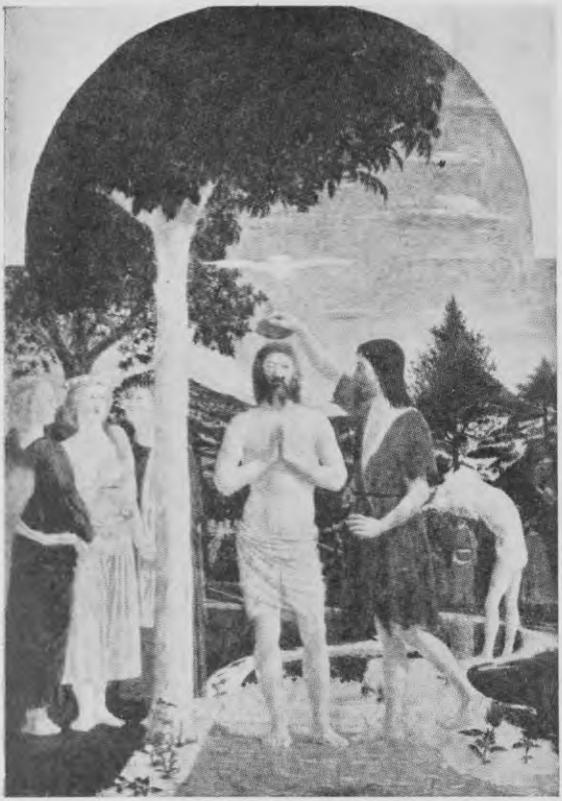
THE TRADITIONAL axiom that one soldier in hospital is one less effective member of his unit can be equally well applied to the one inarticulate or dumb soldier as one less effective member of his regiment. The significance of this latter dictum has been steadily growing during the last century and since the end of the last war has made itself manifest by the creation of a department in the British Army known throughout its ranks as the A.E.C.

The history of the Army Educational Corps makes most interesting and instructive reading, but I am only concerned here with a fraction of its many activities, that which concerns the introduction of art education—*i.e.*, appreciation and tuition in its curriculum. And if I put art appreciation first, it is because I feel the Army authorities are growing increasingly aware of the valuable service it renders in opening the eyes and mind and mouth of the rank and file as well as of the officer class, to whom pictures have hitherto been a "closed book."

In peacetime adult art education has made enormous strides in our towns and cities all over the country, and now the same advantages can still be obtained while the erstwhile citizen is in battle-dress and his country in the throes of total war. That it was found possible to hold eight hundred lectures in the month of September, 1940, when the battle of Britain was at its height says much for the cool-headed and long-sighted policy governing this scheme of education, while the fact that in August, 1941, the total number of lectures in all subjects had risen to nearly four thousand demonstrates the impressive curve that has risen steeply and which will without doubt continue to rise. Each month



John Armstrong. "Icarus." (London : Tate Gallery.) As a specimen of surrealism the general verdict was that it had "come off," having all the odd qualities of super-realism experienced in dreams. "Gives one a nice queer feeling."



Piero Della Francesca (1416–1492). "Baptism of Christ." (London: National Gallery.) "Cool and lovely colour and though remote in conception has the integrity of an eye-witness account." "Makes you think."

that has passed since then has shown a lengthening list of interests pursued, to which art now looks like being a settled and popular item.

I can only speak of what I know, and although my experience as a lecturer is restricted to a small section of this vast organization, it is enough for me to write enthusiastically about all I have seen and heard.

If any civilian artist in the last war had been invited to give a lecture to the "Old Contemptibles" on contemporary art, I think he would have been forgiven for suspecting a leg-pull. I know that when the Educational Corps first approached me in this respect I accepted only with a sense of misgiving, and consoled myself with the fact that the ordeal shared by me and my audience would be for one performance only!

Judge of my surprise when I arrived at the Education Centre to find the walls hung with a loan show of contemporary prints and a well-informed audience of all ranks waiting to give me a really friendly hearing. An excellent epidiascope was at my service, and during the interval for refreshments questions were asked (and very pertinent questions, too) by officers and men who not only appeared to find the art fare much to their liking, but to whom the subject was far from being an exclusive topic for the "high-brows."

Since that first talk we have managed to cover a wide field, and many personalities in paint and many varied schools of painting have been discussed. How has such a happy and enlightened state of affairs arisen? The editor of *The Studio* sensed a story and prevailed on me to dig out some facts. I have done so, and here they are. And if the story does not add up to the required standards of journalism, the blame must rest on the writer for being an artist first and a reporter only by persuasion. By the convulsive impact of war, and its necessary corollary of destruction, it is natural that the soldier as much as the artist should turn to seek mental refuge in the creative arts and thence to hope. When the world is seething with death and despair, the man in the street and his brother in arms crave for such antonyms as expressed by life and faith: art provides such nourishment for such longings. The truth that war, however tremendous and long drawn out, is but a visiting pestilence gives birth to the absolute certainty that art remains for ever.

But it must be good art, it must be progressive, it must be the art of to-day, that which impinges on the life around us. No better way of demonstrating this postulate can be found than a retrospective survey of past achievements throughout the world.

A working knowledge of such a comprehensive background can alone explain and justify the aims of our contemporaries in both painting and sculpture. With the necessary aid of coloured reproductions I have been able to demonstrate the ever-widening spiral of progress in various schools of painting under such headings as —Religious, Secular, Historic, Romantic, and Classic, with their sub-headings of Still-life, Genre, Portrait, and Landscape Painting. Thinking along such lines, a series of talks has developed which I hope are proving of both æsthetic and educational value.

Discussing pictures is worth-while talk. Looking at great masterpieces, if only through the medium of reproduction, is stimulating to the eyes and provocative of interesting speculation and discussion afterwards; while trying one's hand at drawing and painting, for which soldiers appear to have a marked propensity, is splendid occupational therapy. Tuitional classes in drawing and painting are proving popular.

Such questions as, why does one picture immediately attract while another of equal technical merit fails to appeal? What is it in one painting, apart from its subject-matter, that excites and in another that disturbs the beholder? What was the revolutionary aim of the Impressionists and why did it all but fail? What is the future of abstract art, and why does purely representational painting fail to satisfy?

These are but a few of the questions which the Army authorities hold as important, in so much as they evoke discussion and open the mouth of the dumb soldier. They are right. It is a familiar principle that the good soldier is one who knows what he is fighting for and what he loves. The more he knows how to discriminate between the good and the false, the greater his ability to act in the right way at the right time.

The illustrations are selected from some of the favourite paintings chosen by my Army audience, with the reasons for their choice. A questionnaire for the purpose of ascertaining their reactions to the pictures is supplied to the audience at the end of each lecture, and it is these very reasons that fully endorse the importance which the A.E.C. places on art talks, which not only incite the soldier to form his own opinion, but prompt him to express these thoughts both aloud and on paper.

NOTE.—The commentaries under the captions are extracted from replies to the questionnaires referred to in the last paragraph of this article.

Vincent Van Gogh (1853-1890). "Landscape with Cypress Trees." (London: Tate Gallery.) "Intense feeling for life." "Makes you feel what the artist must have felt." "Something behind, bursting through." "An obvious joy to the painter whilst he was painting it." "It depicts nature as seen by the artist and has no additions in an effort to increase its value as a painting." "Is as virile as nature itself."

THE WHITE-EYE

By "CAFFE" with wood engravings by E. MERVYN TAYLOR

THE WHITE-EYE of New Zealand is one of a large number of essentially similar birds which have their homes scattered across a vast belt of temperate and tropical lands from Africa, through India and South East Asia, the East Indies and Australia, to New Zealand and some of the Pacific Islands. Of the sixty-seven kinds of White-eye, the one so well known in New Zealand has the widest distribution and has apparently spread within the last hundred years. Unknown in New Zealand before 1856, the White-eye rapidly multiplied after its first appearance at that date, and is now probably the most abundant of all New Zealand land birds, equally at home in virgin bush and in city gardens, where its habit of feeding on scraps of food has made it almost as familiar as the common sparrow. The White-eye has recently been the subject of intensive study by New Zealand bird-watchers, who have trapped and marked hundreds of birds with distinctive leg-bands, and thus gained much exact knowledge of its habits, life-history, and movements. This account draws largely upon the results of this investigation, published in the journal *New Zealand Bird Notes*.

Throughout the winter months in most parts of New Zealand White-eyes are found in flocks of thirty to a hundred birds, which roam fairly widely over the country, feeding together in tree-tops, shrub, and rose-bush on aphids and other insects, and, at times, on scraps and on ripe fruit. From the evidence of marked birds we learn that the same individuals may feed in a garden for days on end and then move away, perhaps returning again after a few days or weeks. Many, on the other hand, are never seen again after their first visit. Birds which frequented a garden with some regularity returned to it when captured and released at a distance of 12 miles, a remarkable "homing" achievement in birds which had no nests nor young as an inducement to return. There are many records of voluntary wandering of up to 10 miles from the place of original marking, but little evidence that there is any regular "migration," though one remarkable Dunedin bird was found in Canterbury, 150 miles away, twenty-one months later.

The winter flocks break up in September, but before that month there are signs that pairing has begun, and that

nesting territories are being selected. These are long processes, involving quite a little flirtation with several different birds before the final mate is chosen. Nevertheless, it often happens that the final choice is the mate of the last season, and nests are sometimes placed within a few feet of the previous year's site. While the female bird builds the fragile, cup-shaped nest, the male sings loudly his monotonous, though cheerful, song from a neighbouring vantage point. Both birds assist in the incubation of the two or three sky-blue eggs, from which, in ten days, almost naked nestlings emerge. After the eggs hatch, the male no longer has time to sing, for he has to join his mate in searching for food for the ravenous young, which consume over two hundred beakfuls of insects a day during the nine days they spend in the nest. During the stages of nest-building, incubation, and feeding of the young, White-eyes defend the area around the nest or "territory" by attacking others of their kind, and when the young leave the nest, and the family party wanders farther afield, the birds are frequently attacked by aggressive parents at other nests. There are many casualties to eggs, nests, and young at early stages, and only about half the eggs laid eventually become fully fledged birds. Still fewer of such young birds survive a year; perhaps 10 per cent., but the White-eye is to be considered a very energetic breeder, producing perhaps three, and certainly two, broods a year during the months from October to March. So successful has the White-eye been, that in the ninety years since it first appeared in New Zealand it has risen to the position of the commonest New Zealand land bird. In some favoured gardens there are more than three pairs per acre in the breeding season, and in winter several hundred birds may be present.

In late summer the hard-worked parent birds moult their feathers and gain fresh plumage for the winter. With the moult, the flocks form up again, territory, nest, and mate are forgotten, and dozens of birds feed together, substituting a close-knit social existence for their individualistic lives during the breeding season, and wandering far afield. Yet some subconscious urge, lying dormant all winter, draws them back, in many cases to the same nest, tree, and same mate, when spring comes again. It is apparently in winter that occasional flocks, wandering over the countryside in search of food, have been carried out to sea in high winds and gone on flying till they "discovered" and colonized new islands. Perhaps the birds fly to sea of their own volition, but, however it happens, many must be lost at sea for every flock that finds land. Following upon the "conquest of New Zealand" by the White-eye in 1856, the bird has successfully colonized most of the outlying islands—the Chathams, some 400 miles away to the east, the Auckland Islands, 190 miles to the south, and Campbell Island, over 300 miles to the south east. At both Macquarie Island, 570 miles south, and the Kermadecs, 590 miles north of New Zealand, White-eyes have been reported, but apparently have not become permanently established.

The history of New Zealand birds during the past century has been a dismal story of extinctions, increasing rarity, and of diminishing numbers of native species in which the success of the diminutive White-eye stands out in pleasing contrast.

A KOREA REPORT

Jungle WARRIORS

OF RECENT WEEKS in New Zealand there have been in the streets and spots where men foregather a number of officers whose shoulder-flashes bear the single word "Fiji." One of these officers was brought to bay and after a while persuaded to reveal who and what he was. He rejected the title "Commando," and declared himself as an officer on furlough from the Fijian Infantry Regiment.

The regiment is composed of Fijians, and officered by New-Zealanders and white Fijians. Later, as they gained experience and proved themselves, several Fijians were commissioned. Two of the battalions have a sprinkling of New Zealand N.C.O.s, but for the rest the Fijians provide their own. After hard training in Fiji, itself an ideal school for jungle fighters and very similar to the type of country they would find farther north in the Pacific, one battalion left for the Solomons, where it played a notable and successful part in the campaign, not altogether completed incidentally, to eject the Japanese invader from those islands.

After a short stay on Guadalcanal they were sent to a neighbouring island of Florida, and there for five long months they took up a defensive role relieved only by arduous and lengthy patrols which combed the whole length and breadth of the island. The infantry of the 3rd Division will understand their feelings. Finally it seemed their chance had come. They landed on Kolombangara and sent out patrols to contact the enemy. They found no enemy, and the total bag was two Chinese. But they did not have long to wait. Bougainville next saw them, and on Christmas Day '43 they set out for their first patrol outside the perimeter at Empress Augusta Bay. Quickly settling down to their work they reconnoitred the area in all directions and increased their knowledge of the enemy. Before long they set out on an ambitious patrol, of company strength this time, and after a four-and-a-half day trek through the jungle they set up camp at Ibu, nine miles from the coast on the eastern side of the island, and thirty miles from the perimeter. From here they sent out patrols which established outposts sometimes ten miles away from the main camp. Their object was simple enough—to find out all about the Japs and kill as many of them as they could. For this the company was strengthened with the addition of a mortar section and a machine-gun section armed with Brens, not Vickers.

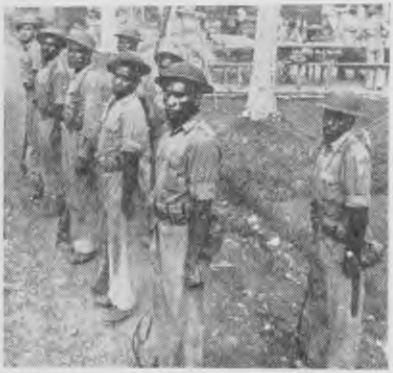
The camp was 1,500 ft. above sea level, and from an old native garden on the hillside they hacked out an airstrip. A "cub" airstrip it was called. One hundred and fifty yards long, it sufficed to land a small cabin monoplane which brought in specialist equipment and took out sick and wounded, of whom there were very few. Supplies were dropped by transport planes. So they lived for over seven weeks, for the first month on their own, and later reinforced with a second company, itself strengthened with mortars and machine guns. During the whole period the Japs were given no peace, and clashes and ambushes were regular occurrences. Striking out of the jungle without warning they took the Japs by surprise again and again, inflicting casualties and leaving the enemy bewildered and apprehensive.

Yet so much master of the jungle did the unit show itself, so resourceful and courageous, that during the whole period

their losses were only one man killed and one officer and one man wounded. On the other side, the Japs lost over two hundred men. In estimating enemy casualties, only those seen killed were counted.

On one occasion a patrol slipped behind a Japanese defensive position. That the last thing in the world the enemy expected was an attack from the rear was shown by the fact that the whole layout was planned to resist an attack from the sea. When close to the position the Fijians were spotted and a few shots came from the Jap lines, whereupon the Fijians poured in a volley of rifle fire, grenades, and Bren gun fire, catching the startled Japs on their way to their action stations and killing forty-seven with no loss to themselves. True to their methods, only those seen killed were counted, although there must have been even more casualties among those Japs sleeping or resting in huts which were riddled by the Brens or blasted with grenades.

After seven weeks the enemy in the area was stirred up, and heavily reinforced his troops, starting a frontal assault on the outposts. So, having inflicted damage, material and moral, on the invader, and having found out all they wanted to know, the Fijians pulled out and returned to the perimeter. On their return journey the track they had used when outward bound was found to be dangerous because of the number of Japs, so, using native guides, an alternative track was made. This became uncertain, and finally they made straight for the coast. For this reason the planes carrying their supplies missed the column and the last two days of what turned out to be a five-day march were done without food.



Later, when the Japanese made a determined and large-scale assault on the perimeter, the Fijian battalions were in reserve and after the assault had failed went out on patrol time and again to harass the retreating Japs. It was during this period that the American decoration of the Silver Star was won by a Fijian private. Left behind with the transport, it was his job to recognize the battalion on its return from an extended patrol and pass the word down so that they would not be mistaken for an enemy patrol and fired on. Whilst waiting he observed a small Jap patrol hiding on the trail which the battalion would use. Gathering four of his comrades he set off into the jungle and routed the enemy, killing five Japanese and bringing back a Jap machine gun, a knee-mortar, and one prisoner.

Of powerful physique, the Fijians have shown themselves both courageous and skilful in the jungle. Excellent scouts and confident masters of bush-craft, they are nearly all marksmen and have the whip-hand of the enemy. Orders are given in English and translated by N.C.O.s. However, many of the New Zealand officers have learnt something of the Bau dialect, the main language of the Fijis, and know enough to give the relatively short and simple commands that are necessary in action. As batmen the Fijians show themselves interested in everything that concerns the officers they serve, and it is they who act as language teachers. Their interest in the officers sometimes has its embarrassing moments. One officer, asked by his batman if he had a "marama" or sweetheart, offhandedly said that some one had taken her from him. He found later that the news was round all his platoon, who were quite concerned at his loss.

Not only have the Fijians shown themselves loyal and stalwart soldiers, they have shown also that they possess initiative and leadership of a high order.

On one patrol two sections, under a Fijian sergeant found themselves cut off from the main body. Making their own way back they found their progress blocked by a

Jap-occupied village. Leaving his Bren-gunners covering the village, the sergeant took the remainder of his men with all the grenades they could muster and quickly and silently made his way to a flank. Then on a prearranged signal the machine guns opened up and the Japs came under a hail of grenades. Giving them no time to recover, the Fijians ended the affray by following up with the bayonet. The sergeant then collected his party, found the trail, and came back to the perimeter without losing a man. This exploit earned the sergeant a D.C.M. and a commission.

Whatever the future may hold in store for the regiment, there can be no doubt that the Fijians will only add fresh laurels to their present well-deserved fame.

BROADCASTING IN NEW ZEALAND

Some Opinions from Servicemen in the C.M.F.

A report supplied by *Cue*, magazine of the New Zealand Education and Rehabilitation Service with 2 N.Z.E.F.

A RECENT UNIT discussion in the Central Mediterranean Forces on radio broadcasting in New Zealand resulted, after a somewhat uneven start, in some interesting and clear-cut findings.

A week before the general talk the group had been primed with interesting miniature lectures by three experts—a technical authority, an educationist, and an advertising man. The combination of these authoritative addresses gave a fairly clear picture of the business of broadcasting as a whole and provided a solid background for the subsequent open discussion.

The question whether radio should be an intellectual exercise or merely a relaxation gave rise to some argument. A strong party held that broadcasting should primarily provide entertainment, but a militant body of educationists felt that valuable work in their field was being done by radio.

A remark "Education is *never* amusing" threatened to side-track the discussion.

One school-teacher speaker, in reply to a suggestion that teachers should be sufficiently trained to conduct their own education programme, said that a radio in a school was useful when the teacher became tired.

More serious discussion from other soldier-teachers produced evidence that educational broadcasting played an important part in extending the scope of lessons, because the talks were usually given by experts in their own field. It was pointed out that no school-teacher could hope to be an expert on everything. The opinion was that the novelty angle appealed to the child and radio lessons were popular.

This aspect—"objective" broadcasting—was left for the time being and the international viewpoint was considered.

Nobody could define exactly the controlling body for frequency allocation before the war, but it was considered imperative that an international body should operate after the war and that New Zealand should have some allocation of short-wave frequencies capable of broadcasting to a coverage extending over the Dominion's sphere of influence in the Pacific.

An international research organization was also thought to be advisable, and it was considered that New Zealand should subscribe to it. The fact that radio research work was at the moment going forward in New Zealand was not overlooked, but the best results would be ensured by pooled discoveries. Television and frequency modulation were mentioned as probable future developments in radio.

Amateur radio operators have contributed greatly on the development side

of radio: it was considered that they can and do produce valuable data by their own enthusiastic efforts, and should be encouraged. It was, however, suggested that strict control should be maintained because of the potential nuisance amateur sets may provide to broadcast listeners. The question of national security, too, was raised and a case quoted of a youthful amateur who, in all innocence, obligingly gave the Germans before the war all manner of information—complete with photographs—which they no doubt turned to good account.

While it was agreed that New Zealand should not presume to dictate her propaganda and policy to the world in general, she should at least have a twenty - four - hour short - wave service covering the Pacific.

The leader of the discussion put this question: "As an aid to education, does the radio have any value?" A general chorus of "No" first greeted the query, but upon examination by the various occupational groups represented it was found that, for instance, the farmers' broadcasts had a definite value and were in demand by the farming community. Gardening, health, and home science talks, too, played an important part in teaching the casual listener something he or she did not know before—and that, after all, *is* an aid to adult education.

Commercial broadcasting came under some intense fire, and the concensus of opinion was that the actual advertising script was "tripe" but the accompanying entertainment was often good. The opinion seemed to be that the bad thing about radio advertising was that the gullibility of women was exploited, and detriment to the male pocket resulted.

In spite of this, it was generally agreed that more people listen to commercial broadcasts than to others—probably because of the more popular type of entertainment provided.

A suggestion was made that any surplus revenue from radio advertising should be diverted to reduce listeners' license fees and to encourage New Zealand talent. The payments in vogue in New Zealand, it was considered, restricted N.B.S. and C.B.S. programmes to the mediocre; and the best local talent was not attracted.

Considerable argument arose over a proposal that Government control of radio should be abolished. Instead, it was contended, there should be set up a Radio Commission somewhat on the lines of the B.B.C. State control of radio, it was held, tended to make it the tool of political parties.

Summing up the discussion briefly, the following points were agreed:—

(1) New Zealand should be a party to international control and development of radio.

(2) Radio programmes should be balanced, catering for both entertainment and education.

(3) School broadcasts are of proven value, and their scope should be extended.

(4) Adult Education: Broadcasts to definite groups fulfil their purpose and at the moment are sufficient in scope.

(5) New Zealand talent should be encouraged to a greater extent. A reasonably good standard should be aimed at, and higher fees to artists and writers would probably achieve not only this object but also help to strengthen cultural groups in the Dominion.

(6) There should be a non-political, non-commercial control of radio, although many felt that this would hardly be practicable now in New Zealand.

(7) New Zealand should conduct a short-wave transmission broadcast to the Pacific area.

(8) Radio advertising must continue because of financial reasons, although it was considered that it was not always in good taste.

SOLDIER FLATTIE

"A POLICEMAN'S LOT is not a happy one" says the song. It is silent about his lot when the Army makes him one of its own policemen. Contrary to public opinion, the military policeman really does other things besides making himself a nuisance when you are on leave. His activities are multifarious.

At an advanced base camp in Italy the Kiwi provosts carried out a raid on neighbouring villages which had its amusing side. Shortly after establishment of this camp and a Polish camp in close proximity, hawkers from these villages began to ply their trade. Such was their success that their numbers increased to a couple of hundred. Coincident with this thriving trade, it was found that articles of Army property were vanishing, and it was learnt that troops were sometimes bartering Army gear, including blankets, for the hawkers' wares. So it was decided to nip the affair in the bud. Consideration was also given to the fact that the hawkers were a menace to security.

So a small party of New Zealand and Polish provosts, later joined by two Italian carabinniere, set out to arrest all hawkers in the area and take them to the Kiwi camp for inquiries.

The first bag, taken within a minute or so of leaving camp, consisted of an unshaven hawker of middle age who protested volubly but who quickly became resigned, and a lad in his teens who burst into tears when hoisted on to the truck but was pacified by the older man.

Next a motley-coloured party of men, women, and children were rounded up and bundled into a three-tonner along with their stock-in-trade, mostly fruit, nuts, and cheap jewellery. A few of the bolder youngsters made a break for some nearby trees, but were quickly recaptured. Some of the women and children made the welkin ring with their sobbing and cries, others took it calmly enough.

This went on all morning, and by noon nearly two hundred pedlars of all ages, sizes, and sexes were locked in a Nissen hut. They were sorted out according to the villages from which they came and their names were taken. Then they were lectured by an interpreter on their conduct and told they must not enter military camps without a permit. Otherwise they would be arrested and charged for daytime trespassing and shot if found in similar circumstances at night.

During the afternoon small parties carried out the more important task of

searching the villages from whence these pedlars came. In one house the provosts "flushed" a couple of Army blankets and some articles of clothing. One of the blankets had cleverly been converted into a pair of trousers, and the daughter of the house, who had been watching proceedings closely, suddenly snatched the trousers from a startled provost's hand and retrieved the buttons. Obviously she was determined to render to Cæsar only the things that were, without any shadow of doubt, belonging to Cæsar.

At another house Materfamilias wore a jaunty cap obviously made from a piece of Army blanket. In spite of a close search, nothing further could be found—so the signora retained what she doubtless considered a chic bit of headgear.

When the three villages had all been searched it was found that the total quantity of gear was not great. In one "line," however, a brisk trade had been carried on, and the provosts recovered just short of a hundred pairs of hose-tops. So P.C. Kiwi had done his job and went back to his beat, probably to look for Kiwis without hose-tops.

POSSIBLE JOBS FOR SERVICEMEN

PRINTING TRADE

Compositing

Two years' secondary or technical education is advisable, and the tendency is to demand higher educational qualifications. Employment as an apprentice may be obtained on a newspaper or with a publishing or job-printing firm. Good eyesight, perseverance, and mental alertness are essential.

Lithography

The printing of magazine covers, posters, illustrations in colour, &c., has become an important branch of the printing trade and one comprising many different types of work. It offers work to commercial artists, who produce the lettering, design, photograph, or other original material from which the actual lithography must start, and also to men who retouch the material and finally prepare it for the printing processes. Openings are not numerous, but workers qualified to become first-class lithographers are fewer still. They require a combination of artistic ability and mechanical skill. A secondary and technical education, including drawing, various branches of commercial art, and perhaps printing, is desirable. The normal period of apprenticeship has been six years.

Photo Process Engraving

In the main, the process engraver serves the printing industry in making the blocks needed for illustrations used in advertisements. He is a highly skilled worker, requiring artistic ability as well as manipulative skill, and the period of his apprenticeship is six years.

Very few operatives are employed in this trade in New Zealand, and even at its highest peak it did not offer employment for more than 150 men altogether. Before the war there were in the trade approximately 133 men, half of whom are now serving overseas, and at the present time with reduced newspapers and reduced advertising the quantity of work available has shown a corresponding cut. The future of photo process engraving is closely bound up with the future of advertising. Advertising in this country has not yet been fully exploited; nor is it likely to be with our present sparse population. It seems probable, therefore, that for some years to come the number of photo process engravers will not rise appreciably beyond the 150 peak.

DEMOBILISATION...

Remobilisation?

An article by TOM HARRISSON from *The New Statesman and Nation*, June 10, 1944

"AFTER THE LAST WAR." Is any phrase more often used in serious Service discussion? Among civvies, too, the phrase is increasingly to be heard these days. Listen to a typical housewife, age thirty, giving her views on the war's end :—

I can't see it ending in under two years. And when it does end, I don't think it will be really over. Every one says the men will be kept out there after the war, and won't come home for years and years. And there will be terrible unemployment at home. Look at the promises they made in the last war about jobs for all, and look what happened.

The peace of 1918 caught the country unprepared; as a result there was much confusion and distress. It was not simply the fault of the Government, who did try, belatedly, to tackle the problem. The High Command didn't help. But basically it was the fault of ordinary people everywhere, in khaki and out. They failed to prepare or inform their minds for that sudden miracle, Peace. When it popped out of agony, they panicked. All war lessons were discarded. To-day we face the same issues.

Many older folk remember this post-war period only too well, high hopes and vanished visions, bitter unemployment and "heroes" singing in the streets. Over and over again, people still talk of the "muddle" and "chaos." Many now feel *anything* would be better than a recurrence. In particular, they feel we must start straight with planned demobilization, key to all that can follow.

In 1917 Lloyd George prepared a demobilization plan designed to restart peace industry quickly. Haig opposed it as "most objectionable and prejudicial to discipline." So it was shelved. Armistice brought a rush to get out. String-pullers wangled out first. Indignation, fanned by the press, mounted rapidly. There were several small mutinies, a big Whitehall march by armed soldiers, and the setting-up of Soviets on the Russian model in one or two units. As Winston Churchill, then War Minister, puts it in his book *The World Crisis* :—

The ordinary soldier without these advantages (of strings to pull) saw his lately joined comrade hurrying home to take his job or somebody's job, in England, while he, after years of perils and privations on a soldier's pay, wounded and sent back to the carnage three and some four times, was to be left until the plums at home had been picked up and every vacancy filled.

In the face of feared violence a hasty plan was made by the War Minister; demobilization on the basis of wounds, service, and age; Army pay more than doubled; new young men for the Army of occupation. Put forward early in 1919, these measures helped, though too late to be fully effective. Demobilization went very rapidly, 3,300,000 in the first five months and on at 100,000 a week. At the same time, some million civilians lost their war jobs. There was no question of an assured job, moderate security, or any broad plan at all. The result is familiar enough. Another war-time Minister, Reginald MacKenna, says it excellently in his *While I Remember* :—

The countries which had been devastated by the war and those which were threatened by ruinous indemnists set to work at once to repair the damage and build up their resources; England, which had endured as long a strain as any without having iron driven into her soul at the sight of her land laid waste or her industry ruined, settled down to drowsy recuperation until the next crisis should arouse her with the threat of financial disaster, revolution, or another war.

Journey Home covers the same people for three years, on the difference between their peace hopes, wishes, ideals, and their peace expectations, what they consider really *will* happen. In nearly every category, expectation fell well below hope. In two cases this is especially

noticeable ; the hope for Total Employment and for sincere Internationalization. These extensively held ideals are widely, deeply felt to be threatened in advance. Worse than that, their opposites, Mass Unemployment and International Strife, are commonly anticipated. Unemployment fear is the most immediate and important : it is strongest, of course, in the Services. Nearly half the civilians also expect much unemployment, and another third think there will be some.

Optimists :—

I don't see why there should be much. There's plenty wants doing.

There's too much rebuilding to be done.

There'll be plenty of work for all—catching up with everybody's wants. Haven't we been skimping and saving for years ? People will want to go on a bust when it's over. That's good for trade.

Compare the pessimistic :—

I think it will be like after the last war, dreadful.

It will be like after the last war, a muck-up.

Between the two :—

After the first two years I reckon it'll go back to the old game again—all lining up for the dole.

It is certainly true that people will want " to go on a bust." They did last time. That was half the trouble. Peace became irresponsible. Again it is bound to raise new conflicts, tempers, impatiences. If the old job *is* available, will you want it back ? Or are you looking for a new opportunity ? Many servicemen and women will answer : No, Yes. The younger end never had an adult civvy life. Their problem is well put by a girl just married to a soldier :—

Unless he stays in the Army—and I know he does not want to do so—demobilization for us means starting a completely new career.

Will Britain offer enough opportunity ? In a recent Mass Observation survey, a greatly increased number both of Services and civvies spontaneously expressed an urge to emigrate after the war. Typical remarks were : " I shall sell my business, if it keeps on its feet, and then I shall go to America," and, " I want to go abroad. New Zealand I'd like. They want carpenters there." A fragment overhead in a Taunton pub :—

Soldier : Well, when it's all over, we'll go to Canada, won't we ?

His Wife : Rather !

And what will the women do ? Will they sit pretty, in industry ? Will they want to go back to housework ? *Journey Home* shows there has been a lot of exaggerated worry about this in the Forces. Women in Britain definitely *do* want to get home. The large majority are getting tired of loyally observed long hours, and routine work in factories. Many pine for a home ; wives want husbands and babies ; others want potential husbands, as any normal girl does. Just one woman war worker can speak for millions like her ; she says of her job : " This is only a wartime measure. You bet your life I only intend it to be."

A majority in public opinion also favours the idea that women should not be *allowed* to stay in men's jobs. And the old slogan, " Equal pay for equal work," is accepted as an essential rule by nearly every one—only 1 per cent. against !

We see, then, that people have new hopes born out of war's sacrifices and self-controls ; they also have old doubts and anxieties, born largely out of the last war. They are ready to plan something different, but not at all sure how it's to be done. They are clear that it will mean some continuing sacrifices and controls—both of self and community. The first step—as nearly all agree—this time is to plan demobilization, key to any planned economy of prosperous peace. This time the Government are planning demobilization ahead, mainly through Minister of Labour Ernest Bevin. The broad principles so far published involve a general assessment on basis of age, home responsibilities, service, skill, and available work. Nothing is yet finally fixed. Independent schemes have been publicized by various groups, from the Conservatives to the Communists. What matters is that few men doubt the need for planned demobilization. This is

equally true of the man-in-the-street. When Mass Observation asked people what they thought the main considerations in demobilization priorities, they named the following items in their order of frequency: (1) family man; (2) length of service; (3) usefulness in "civvy street"; (4) service record; (5) job ready and waiting; (6) age.

Many felt that length of service alone would penalize key men, reserved for the first war years, or later volunteers from safe civvy jobs. Many held that those who could go and make work for others should be let out first, however short their service. Broadly, most are remarkably reasonable and tolerant about it. It will be impossible to satisfy every one. Every one can this time be led to follow a sensible, fair-minded scheme. But underlying the sober general opinion there is, as all servicemen know, a very natural feeling that "I'm an exception, I'm entitled to be among the first, that's sure." A report from the R.A.F. typically mentions this feeling:—

In talking of how it ought to run, everybody invariably takes the class to which they belong, and then puts forward any argument he can think to show why that class comes first.

As a sapper reports from an R.E. unit:—

Of course, every one believes that there will be no early release for him *himself* after the war, but secretly hopes that a chance may present itself for him to get out quickly. Every job is regarded by the person doing this job in "civvy street" as being of national importance.

This very normal "selfishness" upset the show last time. It can only be avoided this time by self-control. Mass Observation polls show one helpful development in this direction. The percentage expecting demobilization to last *under* one year was 30 per cent. in 1941, fell to 20 per cent. in 1942, and away down to 5 per cent. in 1943. Commonly held is the view "it will have to take place over a long period." Gaining ground is the idea that a strong Army of occupation will be required; as an R.A.S.C. driver remarks: "Complete demobilization will never take place, because a large standing Army will be maintained." Moreover, practically half of Britons at present expect another war after this one; 46 per cent. expect it within twenty-five years. In the face of these fears, the soldier dreams of a personal "civvy street" escape. Pessimism breeds apathy. If "the century of the common man" is to mean something *to* the common man, it must be an era of more than creature comforts. Good housing, good pay, security, they mean a lot. But men can live in luxury and be miserable, as they can sometimes live in squalor and be happy. If a man knows where he's going and wants to get there, he can put up with hardship cheerfully. The Freedoms of to-day seem largely Freedoms *From*. The shortage is in Freedoms *For*. The positive, purposive effort for wise and controlled action right from the moment of peace depends on citizens, electorates. There should, by now, be enough women and men of good will and good sense to see that we avoid the shambles of 1918 with its inevitable repercussions, 1928 and 1938. If even as late as 1948 is our demobilization year, we have then to fight for 1958—and 2000, too.

SCHOLARSHIPS IN ACCOUNTANCY

The New Zealand Society of Accountants intends to grant two travelling scholarships in accountancy after the conclusion of hostilities. The scholarships are of the value of £200(N.Z.) per annum for two years. Applications are being received from members of the society who are serving or have served with the New Zealand Forces and who were under thirty when they enlisted. Three similar scholarships are offered by the Incorporated Institute of Accountants of New Zealand, open to members of that Institute. Further information can be obtained on application to—

DAEWS.
DES.
ADERS, CMF.
ADERS PW.

A KORERO Report

HIS UNIFORM is a lounge suit, and he wears no medals. There is, perhaps, a tendency to girth that a P.T. instructor would soon correct. But ready to put a wealth of experience garnered in the business world at the disposal of his fellow-burgesses, he has volunteered, and been accepted by the electors, for civic service. The arena of the Council Chamber has its victories no less than the battlefield. The goal is the progress of the city, and the enemy anything which hampers that progress.

So our City Councillor, typical of his colleagues in the Wellington Council, a city itself typical of the four main centres in New Zealand, smiled when asked what Councillors did bar talk. Certainly meetings are the medium by which the business of the Council is decided, its policies debated, and its decisions made. And talk there is. But talk with a purpose, talk that clarifies opinions, hammers ideas into shape, and ensures that the actions taken will be straightforward.

On first being elected, a Councillor is appointed to several committees, usually at least four. In these committees, each of them dealing with a specific aspect of the Corporation's activities, discussion is more detailed and, in the absence of press and public, freer. As a Councillor finds his feet, he may ask to be appointed to a particular committee on which his experience and talents can be of benefit. And as seniority comes he may be elected to the chairmanship of a committee. Then it will be his task to guide newer members, to control the meetings, to indicate past and future policy. And once a month, when the full Council holds its regular meeting, open to press and public, the work of the committee may be debated and the chairman will be on hand to support and, if necessary, explain the measures his committee has taken. Once a month also the whole Council meets as the Finance and Property Committee.

The committee is, you might say, the work-bench of the Council. A perusal of the names of some of the committees of the Wellington City Council will show how widespread and comprehensive are the authority and interests of that body in the lives of its citizens. The work of the Tramways, Electricity, and Street-lighting Committee aids the Wellingtonian on his way home from the office or factory; a Health, Sanitation, Cemeteries, and Abattoirs Committee, to give it its full name, helps to keep him fit; and any city ordinances he may encounter have first been

debated in the By-laws Committee. To add to his enjoyment during leisure hours is the job of the Reserves, Public Gardens, Parks, and Bathing Beaches Committee; and when his wife takes in the morning bottle from the front doorstep, remember the Milk Committee has a hand in its arrival. Without completing the list there is also a Works Committee, a Housing and Town Planning Committee, an Airport Committee, a Legislation, Leasehold, and Library Committee, an Estimates Committee, an Appeal Committee: the names and functions may, probably, will differ in one city from another, but in all cities that is where the groundwork of local administration is done.

By virtue of his civic position, a Councillor may be appointed to the boards of several institutions and bodies outside the Council. In Wellington the Art Gallery, the Observatory, and Victoria University College, to name some, have a Local City Councillor on their governing boards. And since the war numerous local organizations formed for patriotic purposes have called on members of the Council to preside at their meetings or serve on their committees.

Citizens with a grievance or a scheme for the betterment of the city both look upon the Councillor, rightly in a democracy, as their point of contact with the powers-that-be. He is truly one of the city fathers. To the one he can indicate the right channel of approach for the ventilation of his grievance, explain away the grievance, or intercede with officialdom. For the other, if his proposal has merit, the Councillor can assist in stimulating interest by the relevant authorities or officials.

Service on the Council does something to the citizen. Before his election he may be full of plans as to what he will do to the Council. After some years as a

Councillor it does something to him. He becomes more proud than ever of his city. Not only because of a sentimental affection for the city where he lives and works, and was possibly born, but because he has been privileged to see the machinery of local government in action and take his turn in the engine-room. Like Paul of old, he feels "a citizen of no mean city."

The long hours of unpaid work, the misunderstandings inevitable among human beings, the tedious debate, the abuse and derision which at one time or another strike any one with the temerity to enter public life—all these are more than cancelled by the satisfaction of having a hand in the running of your own city, of having striven to leave things a little better than you found them.

And when the war is won and thousands of men return to New Zealand from overseas, this generation of city fathers hopes that those men who, keeping their eyes open and their minds clear, have seen how cities in other parts of the world are run, and can appreciate what in their own home towns is good and what needs improvement, will answer the call to civic service and give their best to the towns they will live in.

E. V. Paul, Government Printer, Wellington