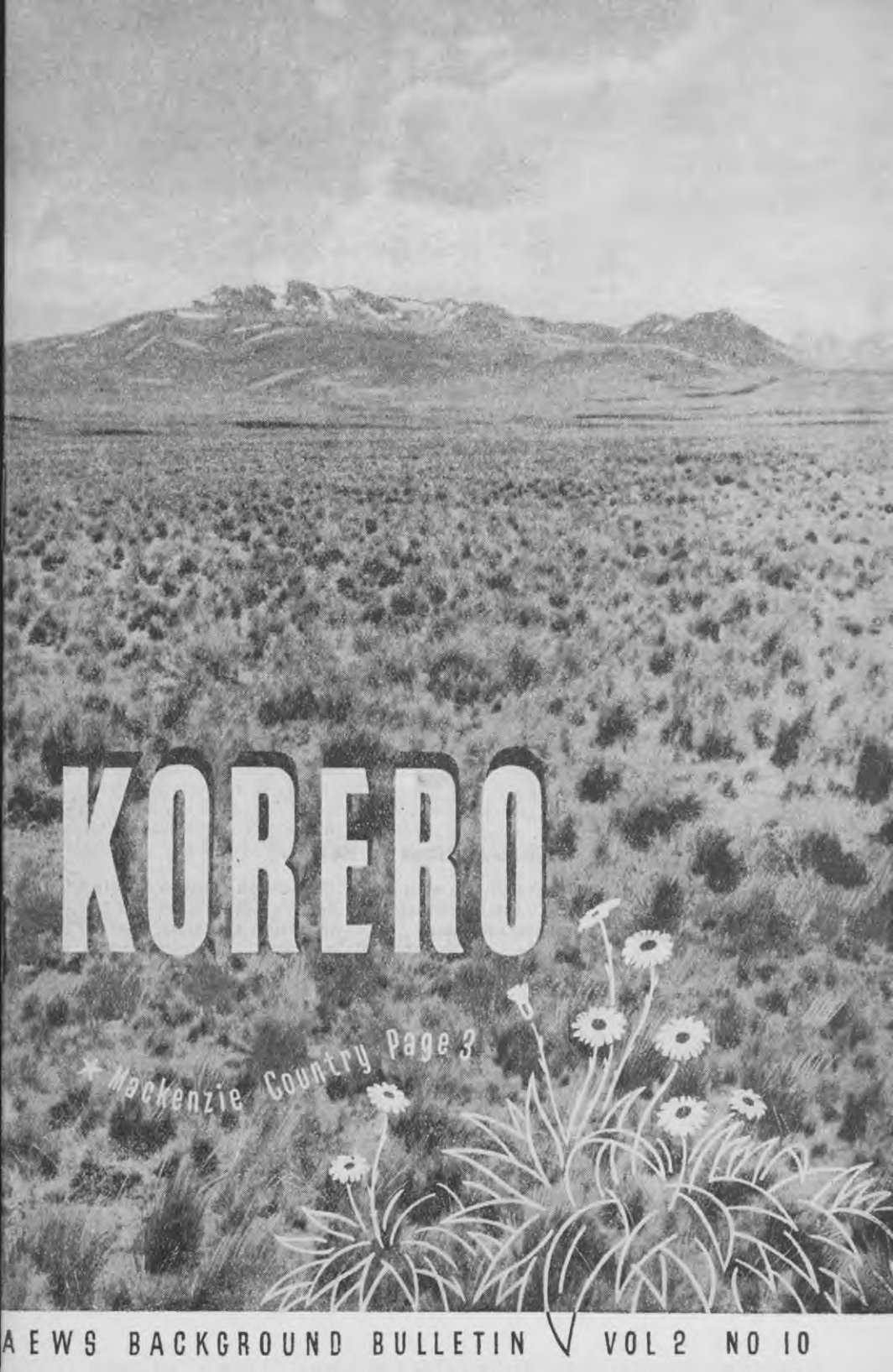
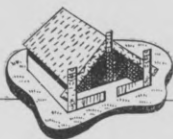




KORERO

* Mackenzie Country Page 3



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IN THIS ISSUE

	PAGE		PAGE
MACKENZIE COUNTRY: Continuing the series, begun in our last issue, on New Zealand to-day ..	3	WHEN YOU GET BACK: Some information on possible jobs for servicemen	13
I WAS WRONG ABOUT THE FRENCH: By Brigadier James Hargest, of the 2 N.Z.E.F., who was captured in Libya in 1941, escaped from an Italian prison camp to Switzerland, and finally reach England	7	SPORTS QUIZ	16
MOVIES FOR THE MILLIONS: Soldiers are keen critics ..	10	WINE OF THE COUNTRY: Report on industry	19
		WITHDRAWAL IN GREECE: An account by a New Zealand medical orderly	24
		COMMISSION OF INQUIRY: A short story awarded first prize in the recent services' literary competitions	28

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.





A KORERO REPORT

THE NAME "country," as applied to a district, has in New Zealand come to be associated with the remote, the wild, and the extraordinary. The King-country and the Mackenzie country are, or were until recently, areas set apart, the one by its forest and the other by its mountain barriers. Moreover, each has a history so curious that legend and truth have become inextricably mixed.

The King-country is fast losing its wildness. Axe and fire and plough are smoothing its outlines, and in another fifty years it will have few visible associations with its past. But the Mackenzie country will always be extraordinary; here Nature has worked on so vast a scale that the marks left by a century of human habitation are trivial scratches. Even now, when Mount Cook is a comfortable day's journey from Timaru, he is an insensitive traveller who, topping Burke's Pass, does not become conscious of a dramatic transition. Behind lies the genteel, cultivated landscape of the Fairlie Basin; ahead everything is bare and vast and unfriendly.

*Nature, earth's angel, man's antagonist,
The stern antagonist from whom he
wrests his bread,
Long heretofore with vast magnificence
Did carve this scene, prepare the arena,
spread
Bronze tussocked terraces before pre-
cipitous
Great purple alps, loose glacier-shed
Fierce-laughing streams in circuitous river-
bed.*

Thus a New Zealand poet seeing the Mackenzie country for the first time.

From a distance the range beyond Fairlie blocks off the plains with such an air of finality that the squatters who began to arrive in South Canterbury in 1850 assumed that it was part of the main divide and that the passes they could see led through to the West Coast. Not for five years did they discover that beyond the range lay a great basin some 30 miles long by 20 broad where sheep could be pastured. The story of the discovery has become a sort of folk-tale in Canterbury. In 1855 the land in the Opihi Valley from the sea inland to the neighbourhood of what is now Fairlie comprised the great Levels Station, held by the Rhodes brothers. In March of that year J. H. C. Sidebottom, manager of the station, was at the Cave "paring the sheep's feet" when Seventeen, a Maori shepherd, came to tell him that a man named Mackenzie had stolen the greater part of his flock. Taking with him Seventeen and another Maori named Taiko, Sidebottom set off in pursuit and picked up tracks along a branch of the Tengawai River.

The rest of the story is told in a letter to his employers. "Just before sundown we came to the pass to the West Coast through the Snowy Mountains, and on looking down a very abrupt hill we saw the sheep and one man keeping them together. When I got to the flat below the man was preparing to turn in for the night. I rode up and collared him and tied his hands. Being regularly knocked up, I meant camping for the night, so I laid down and took a feed of his damper, mutton, tea, and sugar. Foolishly, I untied his hands, but took his boots away, thinking three were surely enough for him. After we had stopped about two hours, we heard some suspicious calls, the dogs began growling and the sheep broke camp." Sidebottom then decided



Stacking oats.

to travel back by night, but ran into mist almost immediately, and his prisoner escaped. At the foot of the Mackenzie Pass there is now a monument with this inscription in English, Maori, and Gaelic: "On this spot James Mackenzie the Freebooter was captured by John Sidebottom and the Maoris Taiko and Seventeen and escaped the same night, 4th March, 1855."

At the end of his letter to his employers Sidebottom noted that "there seemed to be a fine plain just at the back of the Snowy Range and a first-rate pass through the mountains to it." A month later a Christchurch paper reported the discovery of "a plain of immense extent capable of depasturing sheep" beyond the mountains in which Mackenzie had been captured. The first pastoral lease in the

Mackenzie was taken up in the following year; four years later there was eight runs pasturing 17,500 sheep.

Since sheep-stealing was a common enough offence in New Zealand in those days it seems natural to ask why a sheep-stealer should have given his name to a region which equals in natural grandeur the alpine scenery of Switzerland and Italy. Moreover, when we sift truth from legend, Mackenzie becomes a shadowy figure. It is not known for certain where he was born, when he came to New Zealand, where or when he died, or where he lived the greater part of his life; there is even some doubt about his name. He is supposed to have come to Otago in 1847 from Australia; and for many years it was believed by the settlers of the Maitauri district that he had buried the proceeds of his sheep-stealing in Stuart's Bush, near what is now Edendale. After his escape from Sidebottom he was recaptured, brought to trial in Lyttelton, and sentenced to five years penal servitude. Even the reports of his trial are conflicting. After he had escaped three times the authorities wearied of him and he was freed on condition that he left the country. There is a story that years later he came back to the Maitauri district and dug up his buried fortune.

There seem to be two reasons why Mackenzie made a place for himself in history. One is sheer force of personality. Upon everyone who met him, even for a few moments, he seems to have left an indelible impression. He was, we are told, "of large build, with red hair, high cheek bones, and piercing ferret eyes"; his manner was a blend of insolence and cunning, and a favourite affectation was that he spoke only Gaelic. One story about him is typical, whether or not it is true. Before he came to Australia he was a drover and dealer in stock in Scotland. The City of Aberdeen was giving a banquet in honour of Queen Victoria, and Mackenzie contracted with the banquet committee to deliver bullocks at a cut price. After he had collected his money it was discovered that he had stolen the bullocks from the estate of the committee's chairman. The other reason why Mackenzie looms so large in the



Mackenzie sheep-station : Men's quarters.

memory of the district to which he gave his name is that it was settled mainly by men who were, like himself, Highland Scots. As Dr. Johnson and others have noted, the Highland Scots are accomplished legend-builders.

It is conjectured by some geologists that the Mackenzie Basin was at one time covered by glacial ice to a thickness of perhaps 5,000 ft. This mass, sometimes called the Great Waitaki Glacier, had its outlets through the Hakataramea, Mackenzie, and Burke's Passes; its remnants are the glaciers of the Mount Cook region. At some later time the Great Waitaki Glacier probably turned into a vast inland sea which receded leaving behind it Lakes Tekapo, Pukaki, and Ohau. Fed by glacier rivers, and themselves feeding the great Waitaki River, these three lakes assure to the Mackenzie country a permanent importance in the economy of New Zealand. The story of high country pastoralism has over the last half-century been a story of steady decline. Even in the Mackenzie country, where the decline has been least rapid, pastures no longer have the carrying-capacity they had before burning weakened the vegetation. But the hundreds of public-works huts dotted along the hillside at the outlet of Lake Tekapo announce the beginning of the second phase of the Mackenzie country's economic development. To-day it

is wool, to-morrow it will be power. Tekapo, Pukaki, and Ohau are reservoirs which could power the factories of a country many times larger than the South Island.

In the meantime life in the Mackenzie changes more slowly than it does in most parts of New Zealand. Machine shearing, tractors, motor transport, and wireless have had their effects; but the

economy of the high-country station has not changed in its fundamentals. Seeing the Mackenzie to-day, you see it much as Mackenzie the Freebooter would have seen it. The principal change is in the vegetation. Then the floor of the basin was covered with wild-irishman and bayonet-sharp spaniard through which horsemen forced their way with difficulty and even at some danger. The smoothly-rolling tussock downs are the product of fire.

Autumn and winter are the times to visit the Mackenzie. In autumn there is a fair chance of brilliant still days, with Tekapo milky blue and fringed with poplars which are more orange than gold. The winter cold is arctic but exhilarating, and every station has a skating-rink of some sort. If you have ever skated by moonlight in the Mackenzie, you will not forget it. If you have ever played ice hockey as they play it in the Mackenzie, you are even less likely to forget it. By comparison,



The woolshed.



A Mackenzie homestead.

commando training is safe and restful. Summer and spring are liable to be plagued by the nor'wester, which in these seasons can blow for weeks day and night. The warning signal is purple clouds over towards Mount Cook. In an hour or two the outlines of the main divide are lost, and sky, tussocks, and lake surfaces have turned sullen grey. The wind rattles doors and windows interminably, lifts carpets, forces dust through every crack, and outside roars in the trees with a noise like Niagara. If your temper stays equable after a few days of this you are superhuman.

The people of the Mackenzie are very much the product of their ancestry and their environment. As their names show, most of them are descendants of the Highland Scots who pioneered the country. They are imaginative, half believe in ghosts, keep their past with them, and have a passion for memorials. Monuments, cairns, plaques, and liberally-inscribed memorial churches abound in the Mackenzie. There is, for instance, the memorial at the top of Burke's Pass, which reads thus:—

TO PUT ON RECORD THAT
MICHAEL JOSEPH BURKE
A GRADUATE OF DUBLIN UNIVERSITY
AND THE FIRST OCCUPIER OF
RAINCLIFF STN

ENTERED THIS PASS, KNOWN TO THE
MAORIS AS TE KOPI OPIHI
IN 1855.

O YE WHO ENTER THE PORTALS OF THE
MACKENZIE TO FOUND HOMES, TAKE
THE WORD OF A CHILD OF THE MISTY
GORGES, AND PLANT FOREST TREES
FOR YOUR LIVES! SO SHALL YOUR
MOUNTAIN FACINGS AND RIVER FLATS
BE PRESERVED TO YOUR CHILDREN'S
CHILDREN AND FOR EVERMORE.

1917
THIS PASS IS 2,200 FEET
ABOVE SEA LEVEL.

This mixture of the high falutin, the common-sense, and the informative is characteristic. From their environment the people of the Mackenzie get a certain remoteness from the affairs of the world. In all that has to do with sheep they are, of course, severely practical; if you don't know sheep and sheep country you don't survive in the Mackenzie. But in matters of politics and economics they think and talk with a simplicity and directness denied to lowlanders. They see things from an elevation, and they do not know what it means to be parochial. When an inhabitant of the Mackenzie goes beyond Burke's Pass, he talks of going "down country." The phrase implies a moral as well as a physical descent.

"I WAS WRONG ABOUT THE FRENCH"

By Brigadier JAMES HARGEST, in *The Listener*, England, March 2, 1944

Brigadier Hargest, of the 2 N.Z.E.F., who was captured in Libya in 1941, escaped from an Italian prison camp to Switzerland and finally reached England.

I CAME THROUGH France not very long ago. It goes without saying that

I did so as inconspicuously as possible; the slightest slip might have meant another spell of prison, and this time probably in Germany itself. Well, if I have to enter Germany again I should like it to be under different auspices. But even in these circumstances I met a lot of French people, people of all types and classes, and all of them were extraordinarily good to me and anxious to help me. I saw a lot of Germans, too, and I learnt a great deal about them. I travelled and ate with them; I even worked for them during a part of one curious day; but I took jolly good care for my skin's sake not to have to talk to them. I did notice that the German soldier was not as smart and fresh as he was two years ago; in fact, his clothes and his general bearing are showing distinct signs of wear. Not that he does not do himself pretty well. He does, and at the station buffets he always has bread and butter and sausages, while the French civilian can only get bread.

One thing amused me when I was there. Every night there were leave trains packed with Germans going on leave from the north of France to the Riviera. They seemed to prefer to spend their leave in the south of France rather than go home to the blitzed Fatherland; you can't very well blame them for that. I certainly didn't see any signs of arrogance in them. On the contrary it is almost pathetic to see how they go out of their way to please the French. They give up their seats to women; you see them taking their turn in queues; they are careful to say "Thank you," rather like well-trained children. Not that these little courtesies make any difference to the French, who, when they do have

to talk to Germans, do it with icy politeness. Believe me, they make them feel their position as only French people, can.

I remember one morning I was in a room where several French working-men were sitting about and a German sergeant-major came in. There was no fuss, but one by one they just turned their backs on him. They didn't know me, but they did know I wasn't a German and they made a place for me nearer the fire. But the German sergeant-major was left standing there awkwardly knocking out his pipe, and all he could see in front of him was a row of backs. Those fellows froze him out.

No, I don't really envy the German in the army of occupation. If a Frenchwoman goes out with one, her people have their own way of dealing with her. And if a Frenchman has any dealing with the enemy, well, he may get a warning in the shape of a miniature coffin delivered at his house. If he goes on, it is quite likely that he himself fills a larger coffin. Perhaps in the past I have been an unfair critic of the French. I really believed they were effete; that they just gave in in 1940 and became apathetic. And while I was in prison in Italy the Italian propagandists went to a lot of trouble to tell me so. That is all wrong, and from my experience I now know that a whole lot of my other preconceived ideas about France were wrong, too. Perhaps you may be as mistaken as I was.

A few days after I got back here—I was still wearing a woollen jacket a Frenchman had taken off his own back and given to me to keep me warm—an Englishwoman said to me: "These French! What's happened to them is their own fault; they won't fight."

She was a very loyal British subject; but she was saying exactly the sort of things the Germans want us all to say and all to believe. And it's not true. I believe that French men and women to-day are carrying their dreadful burdens with a sublime courage.

The French people are not effete; at least I saw no signs of their being so. They look surprisingly active and virile for a people who have been under the whip of the invader for three and a half years—who have been denied their freedom to an extent completely beyond our imagination. I did see signs of great hardship. Yes, their clothes are shabby, their faces are thin and drawn, but they hold their heads high. I watched them on railway-stations and in the streets, and but for the fact that they rarely smile, and more rarely speak to each other, especially in trains and trams, they carry themselves much as we do here. Shabbily dressed they certainly are. It is next to impossible to get leather, and stockings are even harder to come by. I noticed many women wearing canvas shoes and no stockings at all, even though it was winter-time. Their skirts are darned too, but, typical of the Frenchwoman, they still manage to look neat. And, more typical still, they all seem to be wearing lovely hats. To me those hats were symbols of defiance against adversity, and again and again I was distracted and enchanted by them. I can even describe them in a sort of a way—mostly tall, like pointed busbies, with a soft ball like a powder-puff dangling on one side. I was told that as a hat does not require much material, the Germans had not discouraged the trade.

How are the French people standing up to the Germans? Let me tell you one story I heard. When the Allied Armies landed in North Africa the Germans suffered a momentary panic in France. They asked the French railway management if they could completely evacuate all the German troops from France in twenty-four hours. "No," they said, "we can't do that, but we shall be *delighted* to do it in forty-eight hours."

Fighting the Enemy all the Time

They are fighting the enemy all the time. When the men are called up for labour service in Germany most of them refuse to go. Instead they take to the mountains, to the maquis. In one district of High Savoy, out of 4,500 men who were called up only eleven appeared at the police-station—the rest are in the maquis. There they fight and they hunt and they are hunted. Often they have nowhere to live and they have to sleep out in the open, and they depend for their food mostly on what their friends can take them. When I was there the Germans were waiting for the snow to fall so that they could track them down. Now the snow *has* come, and I read in the paper the other day: "The men of the maquis have been cut off and surrounded by Joseph Darnand's police forces in the high mountains, and their annihilation is now merely a question of time." Merely a question of time, and when they are caught they are shot. But still they go on, ambushing the Germans day and night, until now they have them reduced to a state of terror.

I met men of the resistance movement, too—fine, tough-looking fellows they were who fight and destroy and go on destroying; only they haven't enough weapons to fight with. But with what they have they blow up trains and they throw bombs into German billets and cinemas. Of course, they are caught and shot; or if they are not caught some one else is taken and shot in their place. Not that that stops them. Even while I was there, trains I was on were twice held up by derailments. And one night an express was blown up and forty people were killed, half of them French. It was a pity, they said, this losing of French lives; but it was inevitable, and what mattered was that twenty Germans had been killed.

And the attitude of the French people towards Vichy? That's a question I'm always being asked. I talked to all kinds of people, and on this their views were unanimous. They loathe the Government; they depise Laval, and they will kill the collaborators. For Marshal Petain what they feel is contempt.

To begin with they trusted him; they respected his old age; but that feeling has long since changed to anger. Naturally Vichy has its followers, especially among young boys who are more easily seduced into accepting Nazi ideals. They have been enrolled into what is called the Vichy Militia. And now that the Germans are obviously going to get beaten, these young men have become vicious and even more German than the Germans. And they are being used for terror purposes, but when the German Armies are forced to retreat the Vichy Militia will have to go with them; it certainly won't be safe for them to stay in their own country.

If a Frenchman openly opposes Vichy, he is persecuted, and age does not save him. I remember one elderly man I met one night whose story was typical of many. Once he opposed Petain and his Government; that was three years ago, but for three years he has been a fugitive, constantly on the run. If he is caught he will be punished; it does not matter about his age, and it does not matter that he has given a lifetime of service to his country.

Waiting for the Allied Armies

The French people admire the British—for myself, I feel sure of that. They admire our going on alone after France had fallen. Their hopes are centred on us and our victory. When we bomb French towns they do not blame us; they understand. When the B.B.C. announcer tells them the news, they believe it, as they certainly don't the Vichy newspapers and the German radio stories. I was in scarcely one house where they did not tune into the B.B.C. every time it came on the air in the European Service. They are waiting for the arrival of the Allied Armies, and they hope it will be soon. In my case they sheltered me, and fed me and guided me, and they refused to take anything in return. I knew that food was scarce, and yet, despite my protests, they insisted on feeding me very well, although I felt they would be going without after I

had gone. Once I asked a man whether a certain venture we were up to was safe. "Yes," he said. "You see if we are captured at least you'll have a trial, though I'll be shot like a dog." When it was all over and I would have liked to give him a souvenir he said: "No, don't spoil it. One day your armies will land; that's all I want, just that chance to fight again."

I could go on for a long time with stories of the care the French took of my safety; but I will leave it there. You will understand why I admire and love them, and why a lot of my preconceived ideas about them have altered. France is a sad country to-day—unspeakably sad. There's an awful sense of oppression. It is like a blight over the land, and you feel it everywhere you go—in the towns and in the countryside. You rarely see people smile in the street. The houses are unpainted, the fences are down, the leaves lie in the streets. Many people told me it was not shabbiness or hunger that affected them; it was this awful fear of something impending—a new levy, a new arrest as hostage, or the disappearance of a friend. They are itching for the moment when they can openly join in the fighting again to free France.

But in spite of everything they have kept their sense of humour. I saw it often; it's a thing the Germans cannot do anything about. I'm no beauty at the best of times, and at that time I was looking even less fetching than usual. But one day walking along a road I got quite a build-up. I passed a mother and her small daughter going in the same direction. I heard the little one say: "Mummu, is that man a German?" "Oh no," her mother said. "All Germans carry guns and swords and they are all ugly." I shall never forget the way the French helped me, a fugitive, nor the inspiration of their courage. And I keep hearing those words they used to say to me so often when I was thanking them or saying good-bye: "It is nothing—it is for France."

MOVIES FOR THE MILLIONS

SOLDIERS ARE KEEN CRITICS

By a Staff correspondent in N.M.D.

"**O**F ALL the crazy things in movies the use of music takes the bun."

This was the comment of a young realist during a Current Affairs discussion on "Movies for the Millions" at one of the N.M.D. units recently. All the discussions seemed to be keen—at least nearly everyone had something to say with greater or less degree of emphasis.

This critic continued: "I saw a film ('The Amazing Mrs. Holliday') in which Deanna Durbin sang a lullaby in a nursery. The whole thing was spoilt because she was accompanied by an unseen full concert orchestra. Now you can't imagine children going to sleep with thirty or forty musicians crowded into their bedroom."

Another speaker, a W.A.A.C., took up the theme. "Yes," she said, "It could have been done so easily by making Deanna turn the radio on and then start singing to the music. At least the children would be likely to go to sleep."

Servicemen and women make no bones about the motives behind picture attendance. These are either escapism or habit—"Why do I go to the movies? Because my girl-friend (substitute 'wife' where applicable) likes to go out on a Saturday night." Apart from the younger candid souls who go in pursuit of "a bob's worth of dark," and that select minority who scan the advertisements to find a programme that appeals to them, the bulk of servicemen go from

habit or for want of something better to do.

This does not mean, however, that soldiers and W.A.A.C.s are satisfied with the programmes offering. On the other hand, they are keenly critical both of the subject-matter of current films and of the operation of censorship. In every unit where discussions were held some one had something to say about censorship—usually against it. There were a few who said that censorship in New Zealand was all wrong, and even if it was good they wouldn't like it. These, however, admitted that they had no knowledge of what was cut out of films. But they claimed that so far as censorship on moral grounds was concerned, a film which was considered suitable for public exhibition in England or America should not be subject to further censorship here. "We can take it" was the majority opinion. Of course, the question whether some guidance should be given to parents of children provided a complication. Here the W.A.A.C.s leapt into the breach. "Simple," they declared, "children should not be allowed to go to the pictures."

Now that was a bit tough on the poor children! Even the W.A.A.C.s admitted that perhaps there was room for modification. "Children shouldn't attend pictures under the age of fourteen," one suggested. "At least eight years old before their first picture show," said another. —"Or six!"—And who



is going to keep the children away?" This naturally led the W.A.A.C.s into some difficulties in defending their point of view.

An elderly bombardier—a father of six at least—said it was the women who were softest on the children and let them go to any picture rather than be pestered to death, or else merely to have the brats out of the way for two or three hours. He suggested special programmes for children, to be screened in the afternoons. He was asking for trouble too. "How," they asked, "are you going to stop parents from taking their children to an evening session if they have no one to mind them at home?"

So things apparently got back where they started. It all boiled down once more to the question of censorship. Perhaps there was something in censorship after all. All units agreed that sex was not the only censorable commodity. The popular picture of a film censor was an old gentleman who looked at life through a window bisected by a dotted line representing the sex border-line. Like drafting sheep, he drafted films, above, below, above, below—*i.e.*, Recommended for Adults, Approved for Universal Exhibition, and so on, *ad infinitum*. What was the poor parent to do? Abandon picture-going? Well, hardly. Educate the film exhibitors? Yes, that sounded better. And also, perhaps, to revitalize the censorship and switch its viewpoint over to some of the features that really mattered, such as the pernicious influence of Mickey Rooney on youthful behaviour, and also that popular theme in American movies which invests youngsters not in their teens with the inevitable love affair.

How this was to be done was not quite so apparent. It was freely and somewhat ruefully admitted that public influence on box-office returns could not be effective so long as theatre accommodation in New Zealand remained inadequate for a free expression of tastes and preferences.

The propaganda value of films did not seem to have very much appeal with soldiers or W.A.A.C.s. If there had been propaganda in films they had seen, they retained no impression of it. The list of questions included in the bulletin for assisting to determine propaganda provided a new slant on this aspect, and furrowed brows showed the amount of heavy thought that was being applied in assessing films recently seen.

Much the same applied to film influences. Most people were willing to agree that American films, rather than American servicemen, had given us such expressions as "O.K.," "That'll be the day," "So what?" &c. But other influences were not as readily seen. Troops were content to criticize in general terms the influence of films on children. Serials, it was said, were typical of the shoddy sort of stuff that affected, and infected, children. "Any one would think the New Zealand public was a collection of morons," said a young bombardier. The influence of movies on fashions was admitted, but W.A.A.C.s seemed to be in doubt as to whether the films themselves were not originally influenced by fashions. Rather a case of which came first—the chicken or the egg.



What a storm there was over news reels! To judge by all that was said, there was hardly anything right with news reels. They were too scrappy; they were too long drawn-out; they showed too much of one thing and not enough of another. Their treatment of war news was hopelessly ineffective, superficial, incomplete, lacking in propaganda, hopelessly dull, obviously taken far behind the fields of action. From all of which it may be gathered that all is not well with the news reel.

"Why must all the news reels feature the same thing or things?" was a frequent question—and one to which the obvious answer was one that could only fail to give satisfaction. It was freely asserted that overseas news reels devoted far too much time and film footage to local and domestic affairs. "Why not one news reel for home consumption and another, of more general interest, for export to overseas countries like New Zealand and Australia?"

In this vein of criticism, comment was directed at the New Zealand news reel. In the first place it scored high marks for method of treating subjects and for the distribution of film footage. "Nothing like so scrappy as the overseas article" was a fairly general comment. Secondly, it was a good feature for non-New-Zealanders, as it showed very sincerely interesting scenes of life and activity in the Dominion. There, however, the favourable comment ended and was replaced by some strong criticism. The New Zealand news reels frankly did not interest New-Zealanders. With a few rare exceptions, the subjects chosen were dull, prosaic, or too well known. A W.A.A.C. made the comment that she had seen a New Zealand film dealing with dairy-farming. All she had seen was a series of shots of white-smocked land girls doing their best to impart some "glamour" to the milking-sheds. The whole thing irritated her because it was so obviously posed. Even the white smocks were not only spotless but without a wrinkle.

It was clear that the "March of Time" is a popular feature amongst all types

of servicemen and servicewomen. Its propaganda value was not widely appreciated, but it was generally praised as an interesting, informative, and authentic news film. A popular aspect of "March of Time" was the way in which it devoted a whole session to a particular subject. Critics said this gave them time to see things in greater detail—a big improvement on the news reel proper.

* * *

"What in your opinion was the best film you have seen?" When this question was asked in two discussion groups in C.M.D. most of those present men and women, thought it rather hard to answer offhand, and nearly all of them named two or more films. A film that was mentioned more than others, however, was the comparatively recent "Mrs. Miniver" and then, in order of preference, came: "The Great Dictator," "Mutiny of the Bounty," "Rebecca," "Romeo and Juliet," "The Good Earth," "Blossoms in the Dust," "San Francisco," "Gone with the Wind," "The Story of Louis Pasteur," "Good-bye, Mr. Chips," "Song of the Plough," and "The King of Kings" (silent film).

A majority in these groups agreed that they went to see films for relaxation and amusement, though there were a few who said they went for educational reasons and a few more who said that, mostly because of home ties, they saw films very rarely and when they did they carefully chose the show first.

The question, "Are you satisfied with the pictures as they are?" was considered to be too wide in its scope, and some members of the groups found it difficult to give a succinct answer. However, the replies seemed to indicate that a majority considered "the present position fairly good, though there was considerable room for improvement." Here are some of the suggestions that were made:—

(1) More and better use could be made of educational subjects.

(2) There is too much propaganda.

(3) Sex themes are considerably overdone.

When you get back

THE BUILDING INDUSTRY

IF you have read the C.A.B. "60,000 Houses," you will know that a large number of skilled workers will be needed in the building industry. These are the figures that have been worked out: for every 1,000 carpenters to be trained, it will be necessary to train 133 joiners, 120 plumbers, 44 electricians, 70 roof-tilers, 260 painters and paperhangers, 24 solid plasterers, 22 drainlayers, and anything from 20 to 70 or more bricklayers, depending on how the housing situation develops.

Carpenters and Joiners

Carpentry training schools have already been established—two in Wellington, one in Auckland, one in Christchurch, one in Dunedin, one in Napier, and one for Maoris at Rotorua. It is intended to provide another fourteen or fifteen of these schools, taking care that the training centre is justified by the number of applications for State houses, and the probable expansion of the district.

The "A" class carpentry centres provide a twelve months' course, including approximately eighteen weeks' intensive study in the school itself. For the rest of the time the trainees are actually erecting State houses under competent instructors.

The idea is that every trainee should have experience in erecting practically every part of a State house. So far the scheme has proved very satisfactory. But while there is scope for the mechanization and rationalization of the carpentry

We have tried to make the information given here as complete and accurate as possible; but it should be remembered that changing conditions may invalidate some of it. These articles can be regarded, therefore, only as a general guide.

They do not bind *Korero* or any authority.

industry, there is need also of fully-qualified men who have served a complete apprenticeship. Otherwise we should, before many years, reach the stage when we should have no one fitted to instruct trainees. Because of this, the normal period of apprenticeship for those over eighteen has been three years, and preference has been given to youths who have had a year or two at a technical school.

The importance of technical training for the qualified carpenter or joiner cannot be too greatly stressed, for the work in both branches depends on plans which must be understood and followed. The carpenter and joiner must be able to follow geometrical and architectural drawing, his trade mathematics must be sound, and he must learn the various regulations regarding building.

A.E.W.S. has courses in carpentry and drawing which are suitable for apprentices and also for soldiers who require a knowledge of carpentry for army or for civilian work. Those who have not previously had a technical-school course are advised to study trade calculations and mechanics before beginning the specialized course. The Wellington Technical College has a correspondence course designed for trade apprentices and for journeymen. The course is practical and covers the following



subjects: mathematics, building mechanics, carpentry and joinery theory, and building construction.

The course is free to servicemen.

Wages: £5 5s. to £5 7s. 6d. for servicemen during training. The present minimum award rate is 2s. 9½d. an hour, plus two cost-of-living bonuses. The average ruling wage appears to be about 3s. 3d. an hour.

Plumbing

Prospects in plumbing are very good, but ability above the average is necessary, as well as a capacity for serious study. The normal period of apprenticeship is six years. This can be served with a private plumbing firm or with a freezing company, a Harbour Board, a Hospital Board, or some such body. Attendance for instruction at technical school evening classes is compulsory.

Examinations

The Education Department conducts technological examinations for apprentices in plumbing, a *preliminary* examination in the candidate's second year, an *intermediate* in the candidate's fourth year, and the *final* in the candidate's sixth year.

The Plumbers' Board conducts a qualifying examination which candidates are entitled to sit after they have served five years' apprenticeship. This examination consists of an eight hours' practical test, and a three hours' theoretical test. The successful candidate cannot, however, become a registered plumber under the present regulations until he has had at least six years' service. Possibly in the near future this period may be reduced to five years.

The Royal Sanitary Institute, New Zealand Branch, whose address is care of the Department of Health, Wellington, conducts qualifying examinations in December of each year (*a*) for Sanitary Inspectors, and (*b*) in Sanitary Science as applied to buildings and public works.

Formerly Sanitary Inspectors were recruited mainly from the ranks of registered plumbers, but this is no longer so, as the scope of the work has widened greatly and now includes much more than ability to examine and supervise plumbing and drainage work.

Sanitary Inspectors

A minimum of two years' post-primary education or a pass in the Intermediate Examination of the New Zealand Education Department is required as a preliminary. This must be followed by at least two years' (part time) theoretical training at an approved technical school or under an instructor approved by the New Zealand Examination Board of the Institute. Chemistry and physics (including practical work in these sciences) form part of the syllabus of instruction.

Practical training is also required, and the prescribed examinations must be passed before a certificate can be issued. The practical training may be gained:—

(*a*) By serving at least a year as an Assistant Sanitary Inspector under an approved local authority; or

(*b*) By working under a Sanitary or Health Inspector and receiving practical instruction in the duties of a Sanitary Inspector for at least three hundred working-hours over a period of at least one year. (NOTE.—For men who have had practical experience as tradesmen in plumbing or other approved building craft during at least three years, the minimum requirement is fixed at two hundred working-hours of practical instruction over a period of not less than six months); or

(*c*) By serving as an assistant in the office of an approved Sanitary Inspector for at least two years and by receiving during that time adequate practical instruction in carrying out the duties of a Sanitary Inspector.

Candidates for the examination must be at least twenty years of age, and the entry fee is £6 6s. The syllabus of the examination comprises elementary physics and chemistry as applied to public health; the provisions of relevant Acts, regulations, and model by-laws; methods of inspection and administration; water; food; air, ventilation, warming, and lighting; building construction and sanitation; drainage, sewerage, and sewage disposal; collection and disposal of refuse; prevention of infectious diseases; flies, pests, and vermin; disposal of the dead; port sanitation; statistics and office routine.

Openings for Sanitary Inspectors will never be numerous, and the likelihood of a vacancy occurring with any particular local body depends largely on the age of the Inspectors already employed.

Local bodies governing an area with a population of over 15,000, however, have power to employ suitable men as trainees, and in order to provide facilities for ex-servicemen to be trained the Rehabilitation Board has agreed to subsidize the employing local body up to the extent of 50 per cent. of £5 5s. weekly for the first year and to the extent of 40 per cent. of £5 10s. weekly for the second year of training. It must be emphasized, however, that *openings of this kind will be few.*

Examination in Sanitary Science as applied to Buildings and Public Works

The preliminary education here required is one or other of the following:—

(a) School Certificate (including Chemistry and Physics).

(b) Examination of the Royal Sanitary Institute qualifying for appointment as a Sanitary Inspector.

(c) University Entrance.

As before, the theoretical training covers a period of two years, and practical training is required as well.

A syllabus giving full details of the above examination can be obtained from the Department of Health, Wellington.

Wages for Plumbers

Minimum award rate is 2s. 9d., plus cost-of-living bonuses. Keen men can advance to foremen at £6 10s. to £8 a week.

Bricklaying

Apprenticeship

There is a five years' apprenticeship for boys, but for adults a three-year training-period is sufficient.

Prospects in the Trade

At the present time, with the wide choice of lighter work offering, there are few, if any, boy apprentices. The majority of men in the trade are over military age, and some retired tradesmen have returned to fill the gap left by bricklayers serving overseas. The present scarcity of apprentices, the post-war Government building programme, and new confidence in the well-built brick dwellings' earthquake-resisting capacity all indicate that there will be plenty of employment in the trade after the war, both for servicemen returning to it and for others who may choose to become apprenticed to it.

But while the prospects are good, a great deal depends on being apprenticed to a builder who will teach the trainee how to lay bricks and will not merely engage him to carry them. The work is heavy and unsuitable for disabled men, but at the same time it provides outdoor occupation and variety for those who find it difficult to return to routine work under a roof.

Wages

Minimum award rate is 2s. 10½d., plus cost-of-living bonuses. Because of the shortage at present, bricklayers may receive anything up to 4s. an hour.



SPORTS QUIZ

(Answers on Page 32.)

1. After twenty years in competitive sport Stan Lay is still the best javelin thrower in New Zealand. Stan's best listed performance is a little over 218 ft., a throw which was only four and a fraction inches below the then world record. That was in 1928. The record has soared a little since then. What are the present world figures?

2. When the New Zealand Rugby team visited Great Britain in 1905 the colour of their uniform inspired an English journalist to write of them as the "All Blacks." When Baskerville selected a team to go to England in 1908 to play Northern Union football, the players formed themselves into a limited-liability company and collected quite a bonus at the end of the tour. Consequently they were written up facetiously in New Zealand as the "All Golds." How many of the 1905 "All Blacks" returned to England with the "All Golds" in 1908?

3. Those who favour the left hand in sport do not, as a rule, reach the heights attained by their orthodox brethren. Exceptions, of course, have been known. In cricket we've had Woolley, Bardsley, Clem Hill, and Leyland as batsmen, Peele, Rhodes, and Verity as bowlers. In tennis Norman Brookes won two Wimbledon singles titles. Walter Lindrum is the greatest billiards player of

all time. Only five "southpaws" have won world boxing titles. In sport is the left-hander specially catered for? Are there such things as left-handed (a) tennis racquets, (b) golf clubs, (c) billiards cues, (d) bowls, (e) cricket bats, (f) hockey sticks?

4. The greatest number of consecutive wins by a horse stands to the credit of a Hungarian mare of another generation. The mare, Kinscem, was never beaten in a race and won fifty-four in a row. The New Zealand record for a winning sequence is well below that of Kinscem, but is a little better than the Australian record. What are the names of the New Zealand and Australian record holders and how many consecutive wins did they have?

5. Billy Wallace played in more Rugby tests than any other "All Black." His total was twenty-one tests. Next on the list are Teddy Roberts, Maurice Brownlie, and Mark Nicholls, each of whom played in twenty tests. But Nicholls has scored the most points. His 94 points are just 20 ahead of Wallace's total. In all matches for New Zealand Wallace scored 367 points, followed by Nicholls with 264. But who has played the most games for New Zealand Rugby teams?

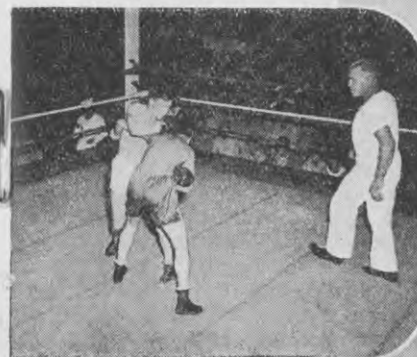
6. New - Zealand - born boxers who fought for professional world titles have

(Continued on page 18.)

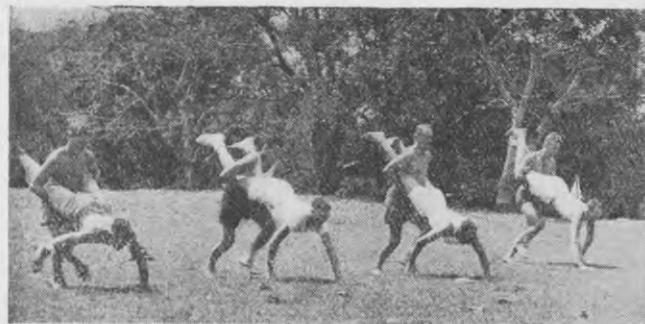
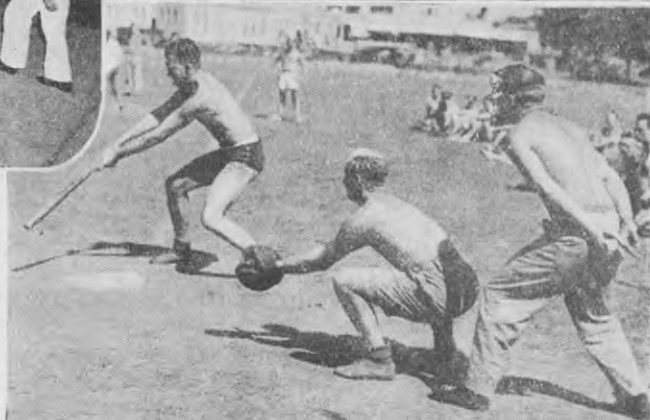
New Zealand Surf Clubs in the Pacific. The Teams march past.

[Official War Photos.]

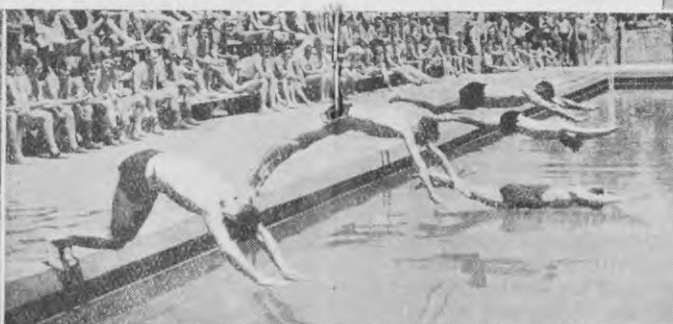
Semi-finals of the Allied South Pacific Boxing Championships. Billy Brown (Invercargill) R.N.Z.A.F., who defeated Joe Rodriguez (U.S.A.)



A team from the 2 N.Z.E.F. in the Middle East plays a Royal Canadian Air Force Team at the American game of Softball.



N.Z. Artillery Depot holds a sports meeting in Necal. The start of the wheelbarrow race.



2 N.Z.E.F. in the Middle East. The start of a novelty race at a swimming sports meeting held by a field regiment at the Maadi baths.



Rugby in New Caledonia. R. Harlin (Auckland), playing for Base Units, gets the ball away to A. Dobson (Auckland) when tackled by D. M. Lind (Wanganui).

(Continued from page 16.)

not been numerous. Bob Fitzsimmons, though bred in this country, was born in Cornwall, so cannot be taken into account. Tom Heeney, it will be recalled, fought a heavyweight title bout with Gene Tunney in 1928. That contest was the only one on which Tex Rickard lost money as a boxing promoter. Apart from Tom, what other New-Zealand-born boxers have fought for a world professional title?

7. At billiards Walter Lindrum once made 100 in fifty-six seconds, 346 in eight minutes, 663 in fifteen minutes, and reached 1,011 in thirty minutes. Fast scoring. For the ordinary player the half-hour is usually well passed before the hundred is hoisted. Of course, Walter is a law unto himself in the billiards world, but he has yet to beat the record of our own champion, Clark McConachy, who once made a red-ball break of 915. At snooker, too, Walter has to bend the knee to his nephew, Horace Lindrum. In a game of snooker, if the opening player misses all balls on the table with his initial shot, should the stroke be replayed?

8. Wembley was the scene a while back of the Association Cup final match at which a wartime record crowd of 85,000 attended. Charlton defeated Chelsea by 3 goals to 1. The all-time record for a Cup Final was made in 1923 when over 126,000 paid to see Bolton

Wanderers defeat West Ham United 2—0. But on that day the crowd broke through the gates and it is estimated that over 150,000 were present. The game was held up for forty minutes while the crowd was being "coaxed" off the playing-area. In soccer the cross-bar is 2 ft. lower than in Rugby. The soccer bar is 8 ft. above the ground. How far apart are the uprights?

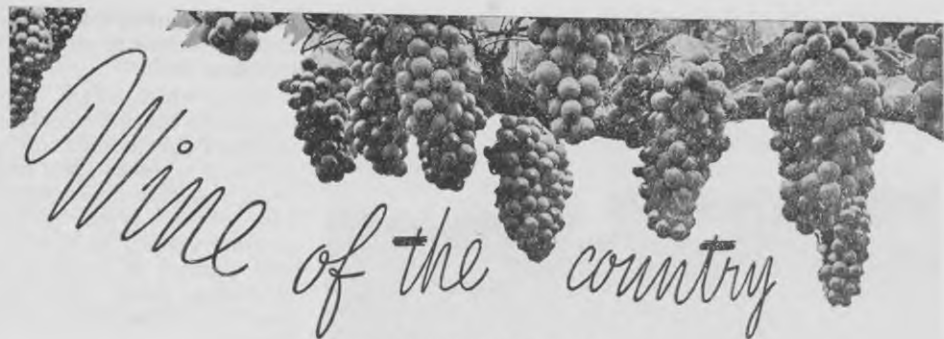
9. Allan Ford, Yale University student, has had a really great swimming season. In 1927 Johnny Weissmuller amazed the world by clocking 51 seconds for the 100 yards. This year Ford has lowered Johnny's figures on a number of occasions. His latest effort for the hundred was 49.7 seconds. The New Zealand record was made in 1940 by an Auckland. Who was he, and what time did he register?

10. Another world record which stood the test of time since 1927 but has now been lowered is the American J. A. Gibson's 440 yards hurdles record. Another American, R. Cochrane, registered 52.2 seconds as against Gibson's 52.6. The International Amateur Athletic Federation recognized Cochrane's figures at its last meeting. Jack Lovelock made a world record for 1,500 metres in 1936, but that, too, has been taken off the books. Arne Anderson's 3 minutes 45 seconds replaces Lovelock's figures. But New Zealand still has a place in the list of world's athletic records. What is that record, and who made it?

BLESSED SLEEP

What is sleep? How does it happen? Well, theories abound, but there's no sure knowledge. Some say that sleep is caused by temporary anæmia of the brain; others that during the day you pile up stores of poison or toxin which drive you to sleep. That doesn't fit in very well with the afternoon nap that you don't really need. Some think that there's a centre in our brain which controls our sleep, and so on. One word on insomnia. It's not so common or so important as its victims believe. The hours of wakefulness seem long and the person who swears he hasn't slept a wink is often telling, quite innocently, a little white lie. Insomnia doesn't usually damage mind or body. It isn't the cause of mental disorder, though it may sometimes be found in mental illness.

How much sleep do you need? Human beings differ, and thank goodness they do. Certainly their needs of sleep are different, and many take too much. Habit plays a big part. Each person must find out for himself what he really needs. Some one once said that a genius needs seven, an intelligent man eight, and a fool needs more. Well, I must be daft, for I like nine. Children, of course, need much more sleep than adults so abundant is their use of energy by day. Between four and five they need on average some ten to twelve hours sleep; between eleven and sixteen about ten hours'.—*The B.B.C.'s Radio Doctor*, in a recent broadcast.



A KORERO Report

WHILE A young New-Zealander was in training for the Navy in England he was invited, with a fellow-Kiwi, to spend a week-end at the home of a wealthy and hospitable Englishman. On his way north in the train the Kiwi read of an historic dinner at which the famous Whitstable oysters had been on the menu and Chablis served with them. The rating knew little of table wines, but this fact stuck in his memory and when at dinner that night Whitstable oysters were served, he remarked to his companion that Chablis was the correct wine to drink with them. Overhearing the remark and thinking that the Kiwi was a connoisseur, his host immediately called for a bottle of Chablis and eagerly sought his guest's opinion on this and the other wines he ordered for subsequent courses. The New-Zealander was soon out of his depth, but he slowly sipped and gravely complimented his enthusiastic host on the quality and variety of his cellar.

Because New-Zealanders are not a wine drinking people, even such a mild deception would have been beyond the powers of most, no matter how adept at talking a line. Names like Sauternes, Chablis, Burgundy, and Hock mean little to us. Although the names have a romantic flavour, these beverage wines, to our palate, have not. Many are often disappointed in champagne, though most are loath to admit it. Dry sherry is not nearly as popular as the sweet variety. Our port, really a sweet red wine, most people find palatable, and our sweet white wines, sherry and Madeira, are

sold, even in normal times in reasonable quantity. But very few New-Zealanders appreciate and drink the dry beverage table wines which we import in no small quantities and which can be made here in our own country.

In Europe these wines are drunk with meals in the same way as we drink tea. Table wines are not popular here because the early settlers were not themselves from wine-drinking countries. Englishmen, Irishmen, and Scotchmen, they brought with them a taste for tea, beer, and whisky. These they have handed down to us. Our taste for wine is yet to be acquired.

But many vineyards in the Auckland and Hawke's Bay areas are producing wine, and though the emphasis is at present on the sweet or dessert types, for which there is a ready market, good table wines can be produced.

At Te Kauwhata the Agriculture Department makes wine for retail purposes, and, through an expert instructor, the Department is assisting other wine-makers to improve the quality of their wines and so raise, indirectly, the standard of the public taste. This work is not easy, for there are problems peculiar to New Zealand grapes and conditions. There are long-established vineyards situated in unsuitable localities. And there are Legislative restrictions which hamper attempts at improvement. But with the aid of skilled knowledge and scientific experiment, as well as the co-operation of the growers, much can be done to produce a good wine cheaply and encourage its consumption in the home.



The Agriculture Department's vineyard at Te Kauwhata.

Generally speaking, in New Zealand different kinds of grapes are not grown to produce different kinds of wine. There are many thousands of varieties of grapes, and in Europe special grapes are grown to produce special wines. Here, though our varieties are numerous, the grapes are broadly divided into black and white, from which red and white wines are made. Incidentally, we can in some cases make a white wine from a black grape by using only the juice of the grape without the skins. In a red wine the skins are also included in the fermentation to give colour to the wine.

These two divisions may again be divided into dry wines, fortified dry wines and fortified sweet wines. Burgundy and claret are dry wines containing little or no sugar and less than 24 per cent. proof spirit. Dry sherry comes within the second class, for though it contains little or no sugar it is fortified with rectified brandy up to 32 per cent. proof spirit. In the third class, and by far the most popular in New Zealand, come port, sweet sherry, and Madeira, all containing up to 10 per cent. of sugar and fortified to 32 per cent. proof spirit. Burgundy, claret, and port are red wines. Sherry and Madeira are white.

Also it should be realized that these titles applied to New Zealand wines are really misnomers. The originals are named after the localities on the Continent where they are made, and their New

Zealand counterparts bear to some of them a resemblance in colour only.

All of which might seem to indicate that New Zealand wines are not made according to Hoyle, whereas when well made they are an excellent wine of their type. In the case of dry wines the Hawke's Bay district is capable of producing wines that will stand comparison with French.

Grapes need a good soil and a dry climate with low humidity. Rainfall should be light but regular, about 35 in. being the ideal. They grow from a vine which will usually produce a full crop within four to six years from planting. With care, and provided it escapes the many diseases to which grapes are unfortunately subject, the vine will continue to bear for perhaps a hundred years.

The vines are usually planted in rows about 8 ft. apart, with about 6 ft. between each vine. A five-wire fence runs the length of the row, and up this the shoots from main rods of the vine are trained to climb. The grape-vine is a natural climber, and skilled pruning is necessary each year in June and July to clear away the wood that carried the crop of the previous season and so confine the vine to the rows. The rods are cut back almost to the trunk and the strongest of the first three shoots used as the main supply line for the next season.

Intensive and continuous cultivation with plough, disk, and cultivator is necessary throughout the growing season. Lupins are sometimes grown between every second row and ploughed in to provide humus. Bordeaux mixture and other sprays are liberally used to check pests.

In September the vine flowers; then the grapes appear and fill out into large luscious bunches (if all goes well) by March and April, when they are harvested. This work is done by women and boys, many of them Maoris, at wages of from 1s. 6d. to 1s. 9d. an hour.

The "black" grapes are purple when ripe, with a greyish bloom. They are acidic and generally a little smaller than a table grape. An average yield is three to four tons to the acre.

The benzine-boxes into which the grapes are picked are carted up to the cellar and weighed to keep a check on the size of the crop. When there are sufficient on hand a crushing begins.

If a red wine is to be made the grapes are tipped into a "stripper," where the stalks are stripped from the grapes by the blades of a large revolving fan. These stalks are pushed out one end of the large cylinder while the "marc"—the pulp, the skins, and the pips—fall through a sieve to a sump below. The stalks are stripped off because they contain substances that might harm the wine during fermentation.

In the sump quantities of a sulphite solution are added to the marc before it is pumped over to the fermenting-vats. The sulphite kills all bacteria, including the yeast carried on the bloom of the grape. Because it carries its own yeast the grape will ferment without outside assistance, but it is safer to kill this wild yeast which may contain impurities and replace it with a laboratory raised and tested culture.

The large, open, concrete vat to which the marc is pumped is specially acid-proofed with a mixture of paraffin wax and resin painted on and burnt in so as to avoid any reaction between the acid in the wine and substances in the concrete. It must always be remembered that wine is a living and delicate liquid—the smallest impurity or germ might sicken and spoil it.

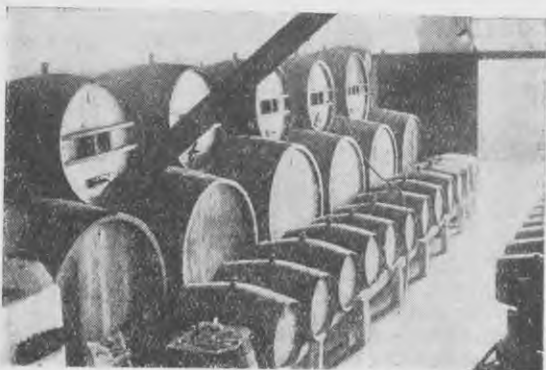
In this vat sugar is added to raise the alcoholic content during fermentation, which lasts from perhaps five days in the early, warmer part of the season to about ten days towards the end. During this time the marc ferments violently and, in the case of a red wine, very beautifully. When the agitator, which pumps the bubbling mixture at intervals for two hours a day, is at work the surface of the vat is covered

with a pale-pink foam. In the centre of the vat the agitator is continually drawing up and pouring out into the delicate froth a thick stream of luscious dark-red liquid.

When a red wine is being made it is essential to keep the skins immersed in order to give colour to the marc. To do this a large circular head made of wooden slats in the manner of a shower duck-board is submerged a few inches below the surface of the vat. Through a hole in this board the agitator shaft drops down to the bottom of the vat, and in the morning, at midday, and again at night it sucks up the liquid from the depths and pours it out on the surface so that the liquid percolates back through the slats and in doing so comes in contact with the skins and thus extracts the colour.

During fermentation the temperature of the marc should be kept between 80 and 85 degrees. Pure grade tannin is added to the fermenting wine during this time because New Zealand grapes are deficient in this ingredient vital to a good wine. It encourages precipitation of foreign particles, guards against secondary fermentation and any flattening of the wine, and, where the wine is too acid, will neutralize this sharpness.

When the violent fermentation has quietened and the desired amount of alcohol has been produced (regular tests are taken for temperature and sugar and alcoholic content) the wine is transferred to large wooden maturing or storage



Some of the casks in which the wine is stored.



A vat of fermenting " marc " with the agitator at work.

casks. It is pumped through a strainer at the bottom of the vat, leaving behind the skins and sediment, but carrying with it the yeast which has not yet completed its work.

The casks, huge oval barrels containing from 500 to 1,500 gallons, are made of Baltic oak. If this wood is not procurable, New Zealand totara is reasonably suitable and is used both for new casks and for repairing old oaken containers. Here the wine will continue to ferment for another two or three weeks, by which time the yeast will have been worked out and will settle to the bottom of the cask. During this final fermentation the casks must be kept brimful to avoid unnecessary exposure of the wine to the air. In order to allow the escape of gas given off by the fermenting wine and yet protect it from vinegar flies and dirt, a loosely packed bag of sand is placed over the bung-hole. As soon as the fermentation ceases the wine is drawn off into clean casks (a process known as "racking"), leaving behind the sediment, or "lees."

Fortification of the wine with rectified brandy is now necessary to kill any bacteria and stop further fermentation. A sweet wine usually contains 27 to 28 per cent. proof spirit after fermentation ceases, and sufficient spirit is now added to bring the wine up to 32 per cent. proof. If the wine is deficient in sugar, small quantities may also be added.

The fortifying spirit is distilled from the "lees" remaining after the clear wine has been drawn off or from wine made from poor-quality grapes. Only vineyards with a certain acreage are allowed to operate stills. In these the wine is boiled and the volatile alcoholic vapours caught, distilled, and condensed.

The wine is not ready to drink. It must mature for another three years while certain chemical and organic changes take place. Wine is a living liquid and, though the casks will be brimful and tightly bunged, it will continue to breathe through the pores in the wood and so mature.

During this ageing process the wine must be drawn off into other casks at regular intervals to free the clear wine from the cloudy wine which settles to the bottom of the cask. This siphoning (racking), which should take place with as little exposure to the air as possible, is done four times the first year, three times the second and twice the third. As the rackings progress there will be a proportionately smaller amount of sediment remaining.

After the wine has come of age it will be clear, but not yet "candle-bright" as it must be before bottling. This "bottle-ripe" condition is attained by the addition of finings to the matured wine to free it from any particles still in suspension. The wine should now produce no further sediment and is ready for bottling.

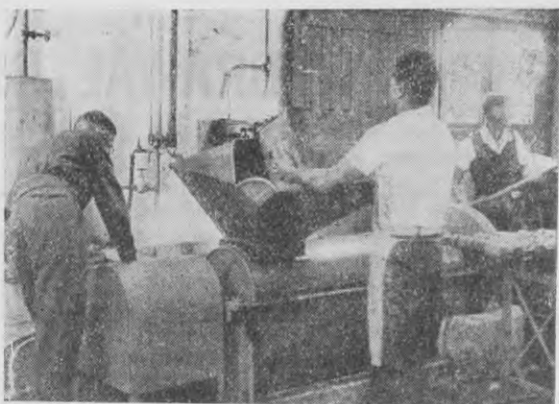
This is done on a rotary filler, after which the bottles are corked, labelled, and crated and are ready for the last operations—the insertion of the corkscrew and the gurgle into the wine-glass.

White wines are made similarly to red, except that the grapes need not be stripped of their stalks before being put through a press which extracts only the juice. This "must" can be fermented in the wood immediately, although with large quantities the use of concrete vats is desirable. Both black and white grapes put through this press will produce

"must" for a white wine. White wine is even more susceptible to disease than red and needs more careful handling.

Cleanliness is the essence of wine-making. The cellar itself must be kept spotless, and all pumps and containers and hoses cleansed thoroughly after use. During winemaking operations all cellar equipment and emptied vats are washed and scrubbed each day. The floor is steam-sterilized daily, and any spills must be cleaned up immediately. The larger casks have a door through which a man can crawl to scrub them out thoroughly each time they are emptied. Again before filling they are sterilized by burning sulphur inside the cask.

All possible precautions are taken by a wise cellarman with a pride in his wines to preserve these fragile children from unwholesome contacts until they are old enough to look after themselves. Then he can send them out, pure and brighter than a new pin, to what is hoped will soon become a not unappreciative public.



The machine which strips the stalks from the grapes.

But if any one should imagine that winemaking is as simple a process as has been described, a word of warning is necessary. The merest outline of the work in vineyard and cellar has been given, and many generalizations made to which the experienced winemaker could find innumerable exceptions. In this art, for art it is, there are a thousand and one exceptions to every rule and a thousand and one things to be watched and worried over. Grapes, climates, temperatures, diseases, woods, local conditions, and many more factors

all play an important part in the production of good wines. Modern science has called sacchrometers, hydrometers, microscopes, and all the apparatus of the laboratory to the winemaker's aid. It has made the production of wine more hygienic, more economical, and more certain. But fundamentally the principles applied have not changed in two thousand years. A wise man remembers that neither have the effects of over-indulgence.



Some of the large concrete fermenting-vats at Te Kauwhata.

WITHDRAWAL IN GREECE

By a New Zealand Medical Orderly

AT THE ration dump we waited to rejoin the rifle unit with which we had been serving on Olympus, and towards evening our ambulance took its place in a seemingly endless convoy moving swiftly rearwards. Though we did not know it at the time, the withdrawal had begun in earnest, a tremendous game of hide and seek with death for the loser.

A scene which must have inspired and cheered thousands of weary men met us at a crossroads where two great rivers of traffic joined. A staff car, on the bonnet of which proudly fluttered the emblem of New Zealand, was parked in the centre of the crossing. Beside it stood a party of officers, one of whom was directing traffic. There was an incredulous gasp as we neared him. "It's Tiny himself!"

Someone said "Gee! It's the boss. What on earth is he doing here?" It was a highly dangerous place, a spot which might at any moment become the target for heavy attacks of Nazi dive-bombers, but it was by just such acts that the G.O.C. won and held, as no other man could do, the respect, admiration, and genuine affection of every single individual soldier in the Division. It is safe to say that there is not one man who is not proud of his leader.

All night the convoy pressed on, and all next day. Here and there we had brief halts to rest for a few minutes and to prepare hot drinks. Twice we stopped to attend to injuries, but always it was "keep going," the moment the task was done. The road became dotted with wrecked vehicles, and we entered a city still smoking from a recent heavy bombardment from the air.

The way was littered with wreckage of all kinds. Our vehicle jolted crazily over rubble-filled craters or lurched to avoid masses of debris. Everywhere was desolation, destruction, ruin. Shops and dwellings, churches, and hospitals—

the raiders in indiscriminate savagery had spared nothing. And yet, we were told, the city had been empty of military objectives at the time of this latest exhibition of Nazi barbarity.

Night merged into day, and day into night, as we travelled, until one day engine trouble held us up for a while and we lost our convoy. There were plenty more though, and we carried on independently, a single unit in an endless chain. Once we stopped "to consider our position," being in doubt as to which route to take. The delay may well have saved us, for as we argued the toss a distant hum grew rapidly to a roar.

A cloud of black bird-like specks in the distance became unmistakably German bombers. From our cover amid the crops on the roadside we watched them form into line, very high, but almost directly above us. Plainly a town towards which we had been travelling was the target. With high pitched scream of sirens they went, one after the other, into an almost perpendicular power dive. Down they went, the sound of their screamers rising to a crescendo of banshee-like wails, punctuated by the rattle of machine-gun fire.

One by one we saw the planes seem to vanish among the buildings of the town. One by one they rose again to form up in the clouds and roar away out of sight beyond the hills, while behind them a great cloud of smoke mushroomed out. There was crescendoing scream after scream, crash after shuddering crash, like the regular pounding of heavy guns, until each plane had dived and dropped its single heavy calibre bomb.

Apparently only two targets had been hit, but we wondered what possible benefit the enemy would reap from bombing an open town. As we moved on again there was a sound like thunder rolling among the distant hills. It was

no thunder though, for here and there, from points we could not see, columns of dun smoke rose lazily.

At last we came to what was plainly a line of defence, and were greatly cheered by the hope that possibly the enemy would be held there. Soon after dark, a short distance behind the line, an officer "pulled us out" of the convoy to join our own unit, from which we had been separated since first going into action. This was our first real halt for some days and nights, and thus a welcome opportunity to rest. We were situated on the edge of a marsh, and day and night the air was filled with the continuous harsh croaking of countless frogs. Mosquitoes, too, were more persistent and more numerous than we would have dreamed possible. They attacked in literal clouds. Otherwise, however, the surroundings were pleasant enough—trees and grass, scrub-covered hills, a stream in which to wash clothing and bathe.

From the nearby high country we could from time to time see enemy aircraft harassing convoys on a distant road. At times the noise of machine-gun fire was almost continuous, and frequently we heard the sound of bursting bombs. By this time we were experts at taking cover. I can still remember vividly how I once wriggled into a culvert so small that I feared I would never be able to wriggle out again. More than once I've thoroughly soaked myself by lying in irrigation channels. Some of the situations seemed decidedly funny—afterwards. All too soon came the order to move. It arrived as we had come to expect, in the wee sma' hours of the night, but I was one of a party to remain behind with an ambulance to deal with wounded should there be any in the convoy. The day before Jerry had been systematically strafing the road, section by section. Prompt with the dawn he reached our section. Like the rest, I dived for cover, and from the shelter of a slit trench watched fascinated while a black three-engined aircraft skimmed bare feet above the road, following along its whole length, guns blazing in short regular bursts.

It was hardly a pleasant experience, this crouching in a muddy hole while round about unseen "things" plopped into the mud and the air was filled with a twittering whistle more menacing than its background of staccato explosions and roaring engines. Have you ever wondered what it is like to be unarmed and helpless while someone has a little sport with a machine gun, with you as the target? We medical folk soon found out. We soon learned, too, the difference between fear and courage. It is impossible not to be afraid, sometimes terribly afraid, under fire. The man who says he does not know fear is either a liar or he is not normal. Courage is simply the ability to keep that fear in check and to carry on with the job just the same.

We had further visitations that day. Once there was a plop in the mud close to my head, and a strong smell of burnt powder. No doubt a spent cartridge case, I thought, and wished there were time to dig it out for a souvenir. Thinking the danger past, I looked up when the plane was directly above me. Quite distinctly, without any possibility of being mistaken, I saw three bombs leave the plane, vanishing as they gathered speed. They were "wailers," and seconds seemed hours as the scream grew in volume, to culminate in the crash of explosions nearly a mile away.

We travelled on again that day, with frequent stops to take cover when the road was threatened, but rejoined our unit without further incident. By this time the "hide and seek" aspect was becoming more pronounced. Enemy planes were never far away during daylight, and we began to travel by night, hiding by day among bush-covered hills. It was a source of satisfaction, though, to think that time and again Jerry flew low over heavy concentrations of men and material, evidently without even dreaming of their whereabouts.

Near one of our stopping-places was a high escarpment, scrub and bush covered to within a short distance of the top. It was a splendid vantage point, so one morning I climbed it, to find a sheltered ledge from which to watch in safety the activities of enemy bombers. All day,

with monotonous regularity, plane after plane "covered" the area between the bluff and the sea. They came one at a time, but the moment the first turned for home a second would roar into sight. The enemy must have known that the area was literally packed with men, but, fly low as he would, he could not find them. Bombs dropped and cannon shells burst without effect.

Once a big flight of bombers tried for a bridge "Must be the beginners' class out for a run," remarked a mate, for out of over a score of bombs not one landed within "cooee" of the mark.

To even the grimmest incidents there is a lighter side, as a rule, and the ability to see this is a treasure possessed by many New Zealand soldiers. We had several good laughs while in this particular area. For example, there was the man upon whom a Messerschmitt dived while he was engaged in "borrowing"



a few chickens from a deserted farm. "Feathers flew," he said, "and I flew, but all Jerry got was a stray fowl I'd missed. B—— thoughtful of him!" and he

showed an armful of spoil. There was chicken for dinner for all that day.

Then there was the great beehive robbery. Quite a large apiary was discovered close to our camp—too close, as we later discovered, when someone decided to have honey for tea. The decision to rob the hives led to considerable discussion on ways and means. In the end two or three chaps armed with great swathings of mosquito-netting, their hands encased in leather motoring gloves, began the task. Results were surprising in more ways than one, and though a small quantity of honey was saved we had our best and broadest smile for some time. In some cases smiles turned to wrath when the outraged bees began a united assault on a party of handy, but innocent, men who had found "desirable residences" in a dry river-bed just below the apiary.



They were forced to leave in haste until the bees had calmed down.

Being with a medical unit we were able to see for ourselves the German attitude towards the Red Cross. It seemed to vary with the individual enemy airman, for I have been a passenger in an ambulance which enemy planes banked to avoid while convoy strafing. On the other hand, I have seen the wreckage of ambulances, plainly marked, which had been deliberately attacked with incendiary and explosive machine-gun bullets. One had had the Red Cross on the roof used as a target for cannon fire, for the cross had been blown out. Others looked like collanders, they were so full of holes. At all events we decided it best to take no risks, so when raiders were about we showed an astonishing turn of speed and dexterity in leaving the ambulance—and the road—for the wide open spaces. Once or twice our spotter, posted so that he could scan the skies behind and above, gave the alarm on seeing flights of birds, getting soundly cursed for his trouble.

As a rule, though, travel was by night when enemy planes were grounded, the vehicles seeking shelter with the first streaks of dawn. During the day we would sleep, hidden among the rocks and bushes. Times without number veritable armadas of the air would roar and scream their way over our shelters. Often they flew so low that they seemed to be almost clipping the tree-tops, obviously searching, and equally obviously not finding, that for which they

searched—us. They would fire random bursts, hoping for some reply that would reveal our presence, and whenever that reply came they were quick to pay deadly attention to that particular area.

When we failed to find a suitable spot one morning a squadron of fighters spotted us as we moved off the road, or so it seemed, for they wheeled from their course and began to dive, with machine guns blazing, apparently at us. It was an uneasy time, but perhaps the Red Cross did save us, for the bullets were directed at the road and we were left otherwise in peace. Morning tea had just been put on to boil, and some clumsy lout in his hurry to escape the guns sent primus and billy flying. Poor chap. He came in for more abuse than the enemy.

Later in the morning exceedingly large flights of aircraft searched the hills and valleys. Along both, so low that I was actually above them, flew a long succession of enemy planes, their screamers wailing like ten thousand devils. Greek shepherds were driving their flocks along bush tracks, and the word "Luftwaffe" was plain to distinguish in their excited talk, but they did not attempt to hide.

Once again I was one of a small party to leave the medical unit for service with a rifle unit, and one morning, while other convoys were hastening back, we set out to advance towards the approaching enemy. It seemed we were to be attached to a rearguard party, to all intents and purposes as regimental stretcher-bearers, but with the difference that while they carried rifles we were unarmed. We joined an R.A.P. in a wooded valley down the centre of which ran a road. Apart from the usual searching planes, the first day passed calmly.

Next day, however, our own artillery began a heavy barrage, firing over our heads and down the valley. The crash of guns and the scream of shells continued all day, and we began to amuse ourselves counting the bursts as the shells landed away in the distance.

Suddenly there came a new sound. A new type of scream. A scream which, instead of dying away in the distance, became louder every moment until it was rather like the whistle of a railway train. Someone yelled "Duck!" As we hugged the ground there was a series of explosions along the top of a nearby ridge, and a line of showers of dirt. Next moment our own guns replied thunderously. There were no more enemy shells. "They must have been trying to pot our guns," said a rifleman, "but those shells must have been a mile or more short." At all events they did no more damage than to shower our M.O. with dirt.

That evening news came—"Expect to contact enemy to-night." We brought the wounded to the roadside at nightfall, and shortly afterwards began to move out. Apparently our battalion was not to be the rearguard after all. A motley crowd, we began the march to a less-advanced area where transport was waiting. We passed men standing ready to blow bridges, and to blast down tons of earth on to the roadway. Ahead of us, ringing clearly through the frosty air, came shouted orders, then suddenly the blackness of night gave way to blinding light and the thunder of guns. Shells screamed towards us, over our heads, to pound the most advanced enemy elements. The guns were straddling the road and close to it, ready to pull out the moment we should all be passed and safely embarked in transport. They fired as we drew level, their flashes lighting up the whole countryside for a moment of intense brilliance.

And so began what was, for our section of the forces at least, the final stage of the evacuation from Greece. At the time we did not know this. We knew nothing of what was going to happen, nothing except that we were in transport racing through the night while little more than bluff and the splendid "delaying tactics" of the engineers held up the enemy.



SURVIVAL IN THE SOUTH SEAS

The Story of a Naval Aviator's Twenty Days on a Raft

By Lt. (jg) GEORGE H. SMITH, in the February Information Bulletin of the United States Bureau of Naval Personnel

ON JULY 14 my flight took off from Guadalcanal at 1330 for a routine combat patrol over Rendova and Munda. We were flying Grumman Wildcats. *En route* to Munda we encountered a series of thunderheads that were so well developed that we could neither go over nor under them. We were, however, able to circle the storm to the south, and arrived on station one hour late.

Though our mission was combat patrol, we found it necessary to start home almost immediately, for we had barely enough gas to get us home by skirting the storm to the south as we had done coming in. We decided that it would be best to fly "on the water," following the coast of New Georgia as far as possible, then go "on instruments." Flying through the clouds on instruments, we hoped to break out by the time we got to the Russell Islands.

My compass, unfortunately, was not working, so my only hope was to fly wing on someone whose instruments were all intact. Shortly after entering the clouds at the eastern end of New Georgia, our formation dispersed and every man was on his own. It would have been foolish for me to continue on instruments with a compass I couldn't depend on, so I returned to Rendova. I decided to try to go around the storm to the south and possibly get close to the Russell Islands before running out of fuel and facing a landing in the water. I followed that plan, but the storm had moved farther south, and when I came down in the water at 1900, I was between 50 to 70 miles south of the Russell Islands.

Landing a Wildcat on the ocean is like dropping a pebble on the water. The water impedes its progress, but it continues to go down. After the belly of my plane hit the water, the plane

went forward 15 ft. to 20 ft., then nosed down for Davy Jones's locker.

Fortunately, I was prepared. I had the hood locked open, and I had an extra canteen and an extra emergency kit on my parachute harness. My shoulder straps and safety belt were drawn as tight as I could get them. When the plane stopped its forward motion, I disengaged the safety harness, kept my parachute buckled on me, gave a hard push with my legs and went about 5 feet up to the surface.

My rubber raft was of the small, one-man, seat-pack type that is an integral part of the seat-type parachute.

Once in the water, it took about five minutes to unpack and inflate the raft. It was dark when I landed on the water, but, despite that fact, I finally succeeded in removing and inflating the raft. I dumped my heavy, water-soaked parachute pack into the raft and painstakingly worked myself aboard, being careful all the while not to capsize the raft and run the risk of losing it in the dark. Completely exhausted, I lay athwartships for almost five minutes, vomiting up the sea-water I had swallowed during the struggle in the water. When I was sufficiently rested, I worked myself farther into the raft and assumed the sitting position from which, but for a very few exceptions, I was not to stir for twenty days.

The night air blowing through my water-soaked clothes gave me a chill, but I shivered for nearly two hours before I finally weakened and decided to unpack my parachute for a blanket.

Once unpacked, the chute was so big and clumsy that there was not room in the raft for all of it. I therefore cut off half the shroud lines and stowed them in the raft against possible future need, and cut off the top half of the



canopy to use as a blanket. The rest I tied in a bundle, secured to the raft with an eight-inch length of shroud line, and, along with the pack and harness, threw them overboard.

By this time, the moon was well above the horizon. It was a friendly, full moon, which I was destined to observe through one complete phase before it should finally disappear and leave me lost and lonely amidst endless black nights. I decided to try to get a little sleep. Unable to lie down in the little raft, I devised a method of sleeping in the sitting position. I tucked my parachute silk under my feet, pulled it back over my knees and over my head, then tucked it in behind me. The silk would then support my head, throwing the weight against my feet. Even with that device, I was unable to get more than two or three hours of sleep each night. The waves and swells were consistently 10 ft. to 20 ft. high. As soon as I would doze off, a wave would break over the boat and wake me up. Then I would bale out the water, doze again, another wave, and so on into the night.

The days were hot, the nights were cold, and the wind and waves were merciless. To combat the heat of the day, I kept my flight suit, helmet, shoes, sun glasses, and even my gloves on. I made a mask out of parachute silk for my face. As a result I suffered very little from sunburn. My light brown hair bleached to a pale yellow despite my helmet's protection.

The wind and waves presented a much more difficult problem than the sun. I kept my sea anchor out so the raft would ride "bow-into-the-waves." At night my parachute silk reduced the shock of being hit by breaking waves, but it did not keep me dry. The constant pounding of the waves was nerve-racking. I soon started cussing at them. The cussing gave way to screaming, and then I got hold of myself. I stopped and prayed for strength to withstand the merciless pounding.

I carried morphine syrettes in my emergency kit for relief from severe pain. When my nerves seemed near the breaking-point, I used the morphine

to give me relaxation. When I was under the influence of the dope, the pounding of the waves ceased to irritate me. I resorted to it on three different occasions, all at night.

The three weeks that I spent adrift in the Coral Sea were not without their exciting moments. I had always wanted to see a whale, and during the first week that wish was fulfilled six times.

On July 20 I saw the first of many Japanese planes that I was to see before being rescued. I drifted on course of about 300 degrees deep into enemy waters. A few enemy planes passed directly over me as low as 500 ft., but failed to see me. I saw an average of one plane a day from then on, some friendly, some enemy, and others too far away to be recognized. I signalled some with tracer ammunition from my .45, with a mirror that I flashed in the sun, and with sea-marker dye. But not a one was to see my signals until August 1.

On July 24 I saw the first shark.

Ordinarily the sea anchor held the bow of the raft into the waves, but around 1330 on this day I noticed that I was riding sideways up the waves. A fish-line which I had secured near the centre of the starboard side of the raft was taut and drawn out at a 90-degree angle to the side of the raft. Suddenly the fish-line snapped, the raft swung back to its usual position, and a shark's fin broke the surface of the water. He swam under the raft and with his dorsal fin cut a fish-line that I had secured to the port side. Thinking a dead shark would float, I tried to shoot him. The bullet struck home. The shark jumped from the water, then floundered and sank. The same thing happened when I tried to shoot a mackerel, so I decided not to waste ammunition on fish.

When I landed on the sea, I had two days' emergency rations with me. These included six small cans of pemmican, three chocolate bars, a small jar of malted-milk tablets, some multiple vitamin tablets, some vitamin B₁ tablets and about three pints of water. I didn't eat a thing the first day.

The second day I decided to ration my food to make it last at least twelve days.

I allowed myself, therefore, four mouthfuls of water each day, half a chocolate bar, which I alternated every other day with one can of pemmican, two malted-milk tablets, one multiple vitamin tablet, and one vitamin B₁ tablet.

On the fourth morning I found an eight-inch fish in my sea anchor. I didn't know how it had gotten there, but that didn't worry me. I took it out and ate it raw.

All attempts to wring moisture out of the flesh failed.

I tried to cut the meat into small squares and wring it out in parachute silk. The silk became oily, but it wasn't enough even to moisten my tongue. Then I tried wringing it out in gauze with the same lack of results. I took some of the flesh and put it between the rounded sides of two canteens, squeezing and rolling to get a wringer action, but this, too, was ineffective.

On several occasions I speared fish with my sheath knife, for that was the only way I could catch them. They refused to take the baited hooks I hung on lines on the side of the raft. Tiny minnows appeared under the raft during the first few days and stayed there until I was rescued. I made a seine out of mosquito netting, caught some of the minnows and swallowed them alive. I had always ridiculed the college boys who gained notoriety by swallowing live gold fish, but I guess now they must have been hungry—because it can be done if a fellow is hungry enough.

I shot many birds during the twenty days, most of them "brown boobies," goose-like birds with a five-foot wing span. I ate the liver and drank the blood. The rest of the meat was not as palatable as the liver, but I cut it into very small pieces, chewed them and swallowed them whole. I had to force it down, but I knew in my mind that my body was getting nourishment.

When I shot the birds late in the afternoon, after they had been fishing all day, they had fish in their throats. These fish were predigested to some extent. The stomach juices had started to work on them and the meat was tender. I could pull it away from the bones, chew it and swallow it. It tasted

as though it had been partially cooked. It was perhaps the best thing I had to eat outside of my regular rations.

Before I ran out of fresh water, I decided to experiment with drinking sea-water. I tried to rig a distilling apparatus out of two canteens, but it was unsuccessful. I tried iodine in the water, but that, of course, did not work. I didn't expect it to, but I had nothing to lose by trying. I even tried putting sulfanilamide in the water. Not being a chemist, I thought by some miracle that it might precipitate the salt. It did not.

My malted-milk tablets were in a small jar with a metal cap of the "screw-on" type. I rigged a valve on the cap that would open under pressure. Securing the bottle to my fish-line, I lowered it into the water. The valve opened at about a 40-foot depth and admitted water. I had two reasons for doing this. First of all I thought that the water at that depth, being under terrific pressure, might not have as much salt in the solution as the water at the surface and I might be able to drink it. Secondly, I thought that it might be colder than the water at the surface and that the bottle might sweat in the sun, like a pitcher of ice water, allowing me to lick the sweat off the bottle. Both assumptions were false and the experiment was entirely unsuccessful.

One day I saw a "booby bird" land on the water, dip its long neck under the surface and take a drink. It made me angry. I couldn't understand why the bird, which was only flesh and blood like myself, could drink sea-water which I could not. I shot the bird, retrieved him quickly and cut him open to trace the course of the water through his digestive system.

There wasn't a thing unusual about it. The water just went in his mouth, down his throat and into his stomach.

Around the intestines of the "booby birds" I found a handful of fat, which I used for greasing my gun. One day the thought occurred to me that I might grease my mouth with the fat and get sea-water into my stomach without tasting the salt. I did that. I greased

my mouth, swallowed some to grease my throat, esophagus and stomach, and drank sea-water until the grease was washed away. For five days I drank a pint of water each day without ill effects. One night, when my raft capsized, I swallowed enough salt water to become nauseated. When I got back on the raft, I felt like vomiting. I got out some of the bird's fat and swallowed it, and my stomach was settled immediately.

On the night of July 29 it rained continuously all night. I laboriously filled my canteens. I caught the rain-water in my sea anchor, but couldn't put it into the canteen because of the rough sea.

I finally solved the problem by putting the water in my mouth, then filling the canteen like a mother robin feeding its young. When the canteen was full, it was still raining and I caught another cup of water. I didn't want to waste it, so I drank the rain-water, thus ending the sea-water experiment.

On August 1 at 0900, after I had seen nothing but Japanese planes for several days, a New Zealand land-based Lockheed Hudson passed very close to me. The tail gunner saw my sea-marker dye spread on the water.

The plane turned, made a wide circle and flew down close to the raft. For the first time in my life, and I hope the last, I cried for joy. The New-Zealanders circled for about one hour. I was afraid they would check my position and leave without dropping supplies, and, frankly, I was getting pretty hungry and thirsty by this time. I put on my rubber paddles, leaned back in the raft, and signalled in semaphore the letters E-A-T. They made another wide circle, and then dropped an inflated life jacket with supplies attached. The bundle hit the water about 30 ft. from my raft. I paddled to it and found Army-type emergency rations, a canteen of water, a map marking my position, ammunition for my .45, a waterproof flashlight, first-aid equipment, a Vey pistol and star shells, and other useful items. I was hungry, but I ate sparingly, not knowing how soon I would be rescued.

The New-Zealanders flew by once more, wobbled their wings, and headed for home.

I watched for a rescue plane the rest of that morning and all that afternoon, but none appeared. I watched, waited, hoped and prayed all day of August 2, but there was no rescue in sight.

August 3 was a dreary day. Mist and thunderstorms were all around me. I didn't expect rescue. I was convinced that I had drifted so far out of position that the rescue planes couldn't find me. I was therefore a surprised and happy man when, at 1100, I spotted three Navy Catalina flying-boats approaching me. Two passed within half a mile but failed to see me. The third passed directly overhead and saw the sea-marker dye I had spread on the water.

He dropped a smoke-bomb to mark my position and called the other planes back, and all three circled the raft. The waves and swells were 10 ft. high. It would have been a rough sea for any craft, let alone a flying boat.

Two of the planes lowered their retractable wing floats and made an attempt to land. Both pilots decided, upon closer observation of the waves, not to risk setting down on such a choppy sea. About that time I drifted into a rain squall and the rescue planes lost sight of me completely.

The third pilot was a little more adventuresome than the others. Although he could not see me, he decided that, if one of them did not land on the water in that vicinity, they would probably never find me again. He dropped his depth charges and about 800 gallons of gasoline to lighten the plane and made a power-stall landing on the water.

His starboard wing float hit a swell as he was landing and started to spin the plane to that side. Quick as a cat, the pilot hit the throttle on the starboard engine, and kicked the rudder and stick to port. The lumbering Catalina straightened out and dropped into the sea. A wave broke over her and smashed the port gun blister, filling the after compartment with water. The plane remained afloat, however, and the crew bailed out the water as it taxied into the rain squall where I had disappeared. After taxiing about two miles, they found me, gorging myself on the

last of the rations that had been dropped to me on August 1.

Despite the Catalina's precarious position on a heavy sea in enemy waters, I for one was in the lap of luxury.

I stretched out on a dry bunk, pulled a warm blanket over me, drank some fresh water and smoked a cigarette while one of the crewmen fixed me two tumblers of grapefruit-juice, a couple cups of coffee, two big steaks, and a large dish of peas.

The sea was so rough that the pilot decided not to risk a take-off at that time. He asked me if the water ever got any smoother out there, but I couldn't offer him much encouragement. Although the waves were running at least 10 ft. high, it was my smoothest sea since July 14.

We stayed on the water all that afternoon and all that night.

I was indescribably grateful for companionship, and the courageous crewmen kept up a continual conversation with me despite seasickness.

At dawn of August 4 the navigator reported that we were 100 miles due south of the enemy air base at Kahili on Bougainville. The waves were still 10 ft. high, but the pilot decided to attempt a take-off nonetheless.

The take-off was successful! The cumbersome plane bounced off the top of one swell and spanked on to another, knocking some rivets out of the hull. It bounced into the air about 10 knots slower than it should have been to be air-borne, but again the pilot's skill saved our lives. No one but an expert pilot could have held that plane in the air without spinning. Ours was an expert, and we remained air-borne.

Before taking off, the crew had lightened the ship by throwing every bit of loose gear overboard, saving just a very few rounds of ammunition for an emergency.

After we had been air-borne about ten minutes, three more Catalinas appeared and escorted us home. They had come out to search for their lost plane. I was taken to a field hospital on Florida Island.

Though my rations were meagre, I had been able to keep my body in fairly good condition. I lost 20 lb. during the twenty days and suffered somewhat from pressure sores that developed on my elbows, back, and buttocks. On the raft, my feet were wrinkled and white from constant immersion in salt water. After I was rescued my hands, feet, and ankles began swelling.

ANSWERS TO SPORTS QUIZ

1. 258 ft. 2½ in. by Yrjo Nikkanen, of Finland, in 1938.

2. Four. George Smith, Duncan McGregor, "Massa" Johnson, and Billy Mackrell.

3. There are left-handed cricket bats and golf-clubs. No other sport specially caters for the left-hander.

4. New Zealand: Gloaming and Desert Gold each 19. Australia: Ajax 18.

5. Maurice Brownlie 59, Wallace 51, Fred Roberts and Mark Nicholls each 50.

6. Billy Murphy won the Feather title from Ike Weir in 1890; Herbert Slade, a Maori, fought John L. Sullivan for the Heavy title; Dan Creedon fought Fitzsimmons for the Middle title in 1894.

7. No. It is a foul shot and four points are given to the opposing player.

8. 24 ft.

9. P. Hanan, 53½-seconds.

10. Women's 100 yards. The late Doreen Lumley in 1938 equalled the record of 11 seconds held by Misses Burke, of South Africa, and Koen, of the Netherlands. Miss Norman, of Australia, is also a co-holder.