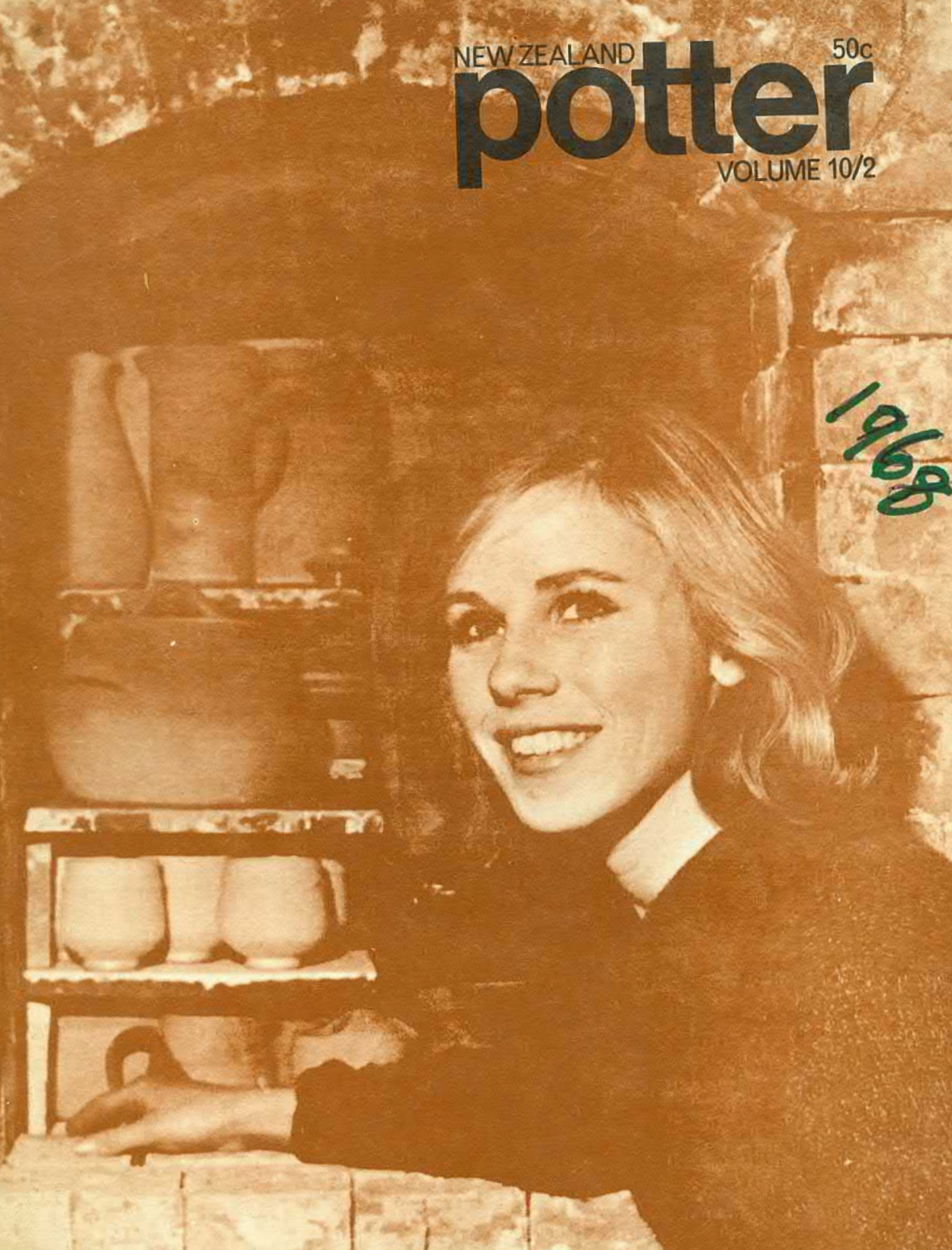
NEW ZEALAND
potter
50c
VOLUME 10/2
1968

contents

FRONT COVER
Claire Bunby, one of the few young women potters active in New Zealand, is photographed in front of her kiln. Claire's work and her first exhibition held recently in Auckland, are reported on in an article starting on page 41 of this issue.

M. SMÍŠEK
TE HORO

NEW ZEALAND
potter
VOLUME 10/2 SPRING 1968

editorial...

When the New Zealand Society of Potters was in formation, two policies were discussed. One favoured the formation of a large society open to all with an interest in pottery, and the other, which prevailed, was for keeping the membership to practising potters who could meet the selection standard of the annual exhibition of the Society.

The Society, in conjunction with local groups, then mounted a series of annual exhibitions which did much to awaken the New Zealand public to the advances being made and stimulated the demand for pottery. A number of potters have taken to full time production and amongst this group there has been some drift away from support of the Society as priorities have changed, with a consequent loss of some of the more accomplished or individual contributions to the Society's exhibitions.

Many other organisations have taken to showing pottery, in some instances upon a very selective basis. These developments have taken away something of the special position of the annual exhibition.

This year, the Society, through its selectors in Dunedin, has imposed a selection of a new order upon members and candidates. The 12th exhibition will be covered in detail in the next *'Potter'*, but first reports suggest that the action has had a revitalising effect, and has also won wide support.

AN APOLOGY

This issue, the last for 1968, is late. A magazine such as this, dependant upon the time and energy of a volunteer committee cannot always keep to a schedule. We express our regret to readers and advertisers.

"THE POTTER" IN 1969

Plans for expansion, plus consideration of rising costs, caused the Editorial Committee to decide in favour of increasing subscriptions as follows:

$2.00 annual subscription: or
$1.00 per copy.

(Overseas rates can be found on the inside back cover)

The last time the *POTTER* increased its price was in 1962.

A NEW EDITOR

The good news for 1969 is the acquisition of an editor, Mrs Margaret Harris, of Wellington. Though not a working potter, Margaret has in good measure those other qualities which are more important to the editorial position.

A graduate of Canterbury University, Margaret's introduction to pottery was at the Craft Centre in Christchurch. Since then her close interest has been maintained through exhibitions and visits to potters.

In her position as Editor, Margaret will be drawing mostly from five years' experience with the Overseas Trade Division of the Department of Industries & Commerce, where she edited *Export News*, the Department's monthly trade promotion publication.

As editor of the *New Zealand Potter*, she will be following the editorial committee's aim of broadening the scope of the magazine (and we hope increasing the readership), by including articles about related arts and crafts of interest to potters.

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FIJI

AN ACCOUNT BY JEREMY COMMONS OF THE VISIT TO FIJI BY A GROUP OF NEW ZEALAND POTTERS.

PHOTOS BY DAVID CARSON-PARKER

The islands of Fiji are the closest territory to New Zealand to preserve an unbroken tradition of native pottery. In 1966 Helen Mason spent several weeks living in a *bure* in the Sigatoka Valley; she worked with Fijian potters and studied their techniques, and on her return published an account of her experiences in the **New Zealand Potter, Vol. 9. No. 2.**

Helen's article stimulated such interest that when Bruce Palmer, Director of the Fiji Museum, came home to New Zealand on leave in 1967, David Carson-Parker suggested a group expedition to him. During his five years in Fiji, Bruce's extensive studies of native pottery had led to a deep concern that the traditional techniques should not be allowed to die, and he readily agreed that the Fiji Museum would act as host to a visit by New Zealand potters.

The visit took place last May – a memorable experience for the twenty-eight of us who took part. The following pages record the demonstrations we saw in Suva, and the excursions we made to potting communities to see firings in progress.

Initial demonstrations were wisely held in Suva rather than in the villages themselves, so that we were able to concentrate without interruption on the progressive stages of making the *kuro* or cooking-pot. Amele from Sigatoka, who had never been to Suva before, was accompanied by Malachi, the headman of her village, who acted as her interpreter. **(1)**

Placed on sacking sprinkled with river-sand, her own local clay she had brought with her was wedged by foot, then rolled into three rough cylinders. Using a 'paddle and anvil' technique (wooden paddle in one hand, round river-stone in the other), Amele beat the first of the cylinders into a rough base for the pot. **(1)**

The remaining two cylinders, rolled out into flat slabs, were now used as prefabricated sides **(2)**. By the time all seams had been beaten out, the pot was already roughly assuming its shape. Fijian potters have never used a wheel; consequently they walk round their pot. Hybiscus twine was wound round the base to give extra support **(3)**. After the pot had been allowed to stand for two to three hours, the sides were progressively beaten rounder and thinner, giving an increasing egg-shaped appearance.

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Here the surprises began! Using a sliver of bamboo, Amele cut a large hole in the side of the *kuro* **(4)**. The clay taken from here was beaten thin and used to patch the top of the pot. Hand and river-stone now gained access through the hole in the side, and the top was beaten into a smooth thin dome **(5)**. Paddle and stone were kept wet by dipping the paddle in a bowl of water and tapping it against the stone.

The pot was now left overnight to become leather-hard.

Continuing work the following morning, Amele inverted the pot, so that the dome, beaten thin with such meticulous care the previous day, now became the base. Simply by digging into the clay with her fingers **(6)**, she made a new opening in what was now the top – the original base – and used the clay from here to patch the hole in the side.

Since the original base had been only roughly shaped, the thickness of clay round the new aperture was quite sufficient to allow it to be beaten out into neck and rim **(7)**.

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The rim was formed, firstly with paddle and stone **(8)**, then by hand **(9)**. This was virtually the only occasion on which the clay was shaped directly by hand rather than by implement.

The construction of this pot was necessarily staggered over two days, but under normal conditions, when a potter works at several such vessels in different stages of construction, up to nine can be made in a week.

Amele was now joined by two other potters from the Sigatoka Valley who, with the aid of an interpreter, demonstrated how the same traditional methods can be used to make modern cylindrical and hanging vases, ash-trays, etc.

This part of the demonstration eloquently illustrated Bruce Palmer's concern that, without tactful guidance and encouragement, genuine traditions may very easily disappear or be misapplied.

Amele, meanwhile, went on to make another traditional vessel, a *vuluvulu* or finger-bowl, decorated round the rim with an impressed shell pattern **(10)**.

It was now the turn of Karolina, a potter who comes from the village of Nasilai Rewa, to demonstrate the very different and distinctive work of her own community. Her basic technique was the same – paddle and anvil – but some of her forms and the lavish decoration of applied dots were radically different.

The pottery of Nasilai Rewa presents peculiar features and problems. This is a tradition which, after dying out within living memory, has been revived at Bruce Palmer's instigation. It was thus saved just in time, before the line of first-hand knowledge was broken. But its precarious existence is manifest in its forms **(11)**. The traditional forms are the beautiful and elaborate canoe- and globule-shaped *drua* or drinking vessels (**11**, *foreground*), used by children and invalids last century, but purely decorative nowadays. Clearly these cannot form the basis of a meaningful craft today. Yet other forms appeared to play equally little functional roles in the lives of the people. They included Victorian-inspired vases (**11**, *background*), wall vases (*centre*), and the inevitable ashtrays *(not illustrated)*.

While there is obviously an urgent need for new and meaningful forms, we were left with the feeling that the increasing introduction of metal and plastic domestic ware made it doubtful, to say the least, whether any would be found.

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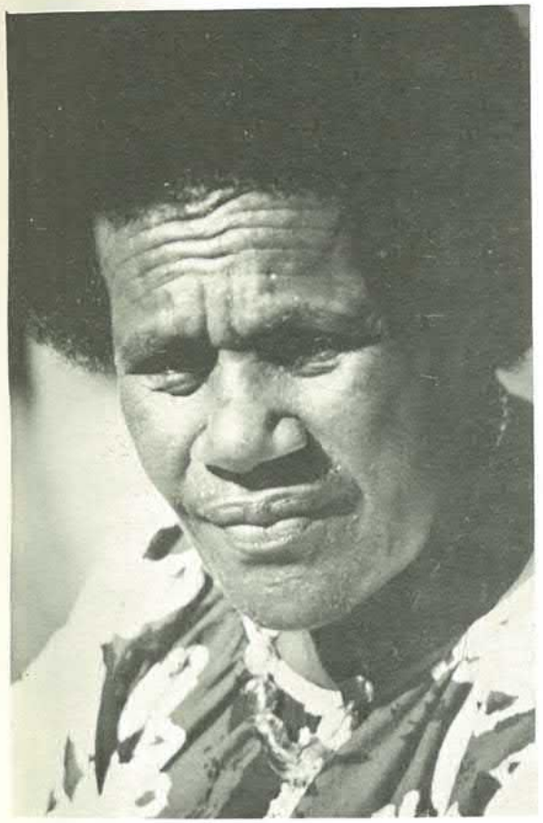
New Zealand potters tried their hands at Fijian techniques. Patricia Perrin and Elizabeth Shaw are shown with schoolteachers from a Fijian women's leadership group who attended the demonstrations **(12)**. Second from right, next to Elizabeth Shaw, is Apisaki Buadromo, one of the most colourful Fijian personalities we met.

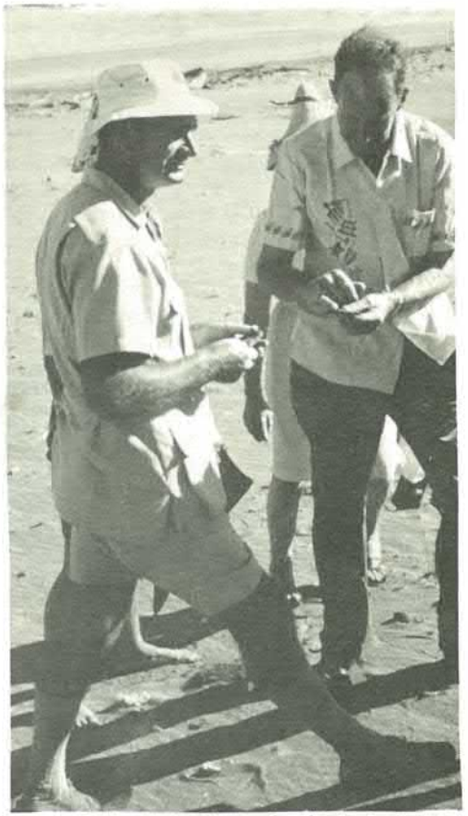
In all parts of the Pacific except New Guinea, pottery appears to be a gradually dying art. In the Solomon Islands the last potting communities are nearing extinction; in New Caledonia they have virtually disappeared; in the New Hebrides a little – a very little – activity still continues.

Fiji ranks second to New Guinea, for there are five communities still at work: the island of Malolo, off-shore from Nadi, which has an active export trade to the western seaboard of Viti Levu; the lower Sigatoka Valley, where about seven villages practise the unique technique involving partially prefabricated side-slabs illustrated in these pages; the upper Sigatoka Valley, where three remaining potters still ply a lively trade through the centre of the island; Nasilai Rewa, a revived community whose work is also illustrated here; and Yawe on Kandavu Island, some sixty miles to the south of Suva, where particularly large cooking-pots are still made.

As Bruce Palmer impressed upon us, however, there is no room for complacency. A community in the Ra district in the north of Viti Levu died out as recently as 25 years ago;



Amele



Bruce Palmer at the archeological site on the Sigatoka sand-dunes.

it remains to be seen how long the Nasilai Rewa community can survive.

Bruce and his assistants at the Fiji Museum, Anne Loweth and Pauliasi Ledua, proved a fund of information on all aspects of Fijian pottery and archeology. To Bruce especially our thanks are due, for without his enthusiasm and assistance the expedition could never have taken place. We were also fortunate that Elizabeth Shaw from Auckland joined our party. Elizabeth is both a potter and an archeologist, and on previous visits to Fiji had worked with Nasilai Rewa potters, and collaborated with Bruce Palmer in studies of pottery at Nasama village in the lower Sigatoka Valley and Nakoro village in the upper Sigatoka Valley. Last year at Natunuku, near Ba on the north-west coast of Viti Levu, she made the earliest archeological finds yet recorded in Fiji: Lapita-style pottery dating from 1290 B.C.

At the end of our visit we were taken to an archeological site on the sand-dunes at the mouth of the Sigatoka River. The shards we saw in profusion here – they were so thick that they appeared to be simply spilling out of the sand – dated from about 200 A.D. onwards. Though different from any of the modern pots we had seen, they displayed techniques which were startlingly comparable; finger-pinched designs, shell decoration, and leaf designs clearly impressed with paddle and anvil.

One of our first excursions into the field was to see an Indian potter – the only one working in Fiji – at Nasinu. He used a rough concrete wheel, mounted on a spike in the ground, and spun by means of a stick inserted in a hole near the periphery **(13)**. While the wheel retained momentum, the potter threw one pot after another from his cone of clay **(14)**. This potter supplies markets in Suva and Nausori, and makes a variety of forms from cooking-pots to incense burners and primitive nose-pipes.

This visit was arranged by Dr. Lindsay Verrier, a member of the Fiji Legislative Council, who took a great interest in our visit.

After an exciting boat-trip down the Rewa River, we reached Nasilai Rewa where we watched the village potters at work **(15)**. Peter Stichbury is in the background watching Karolina who is on the left.

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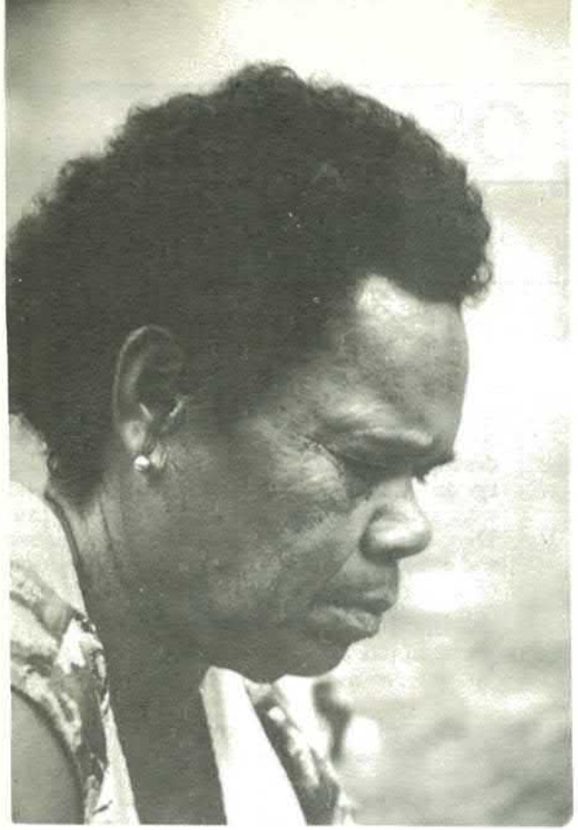
The firing here was very primitive. Pots were loosely stacked in a bonfire of dried grass and coconut fronds which burnt for seventeen minutes **(16)**. Kerosene tins supplied draught; temperature could not have exceeded 700°. (Later at Sigatoka we saw a rather more scientific firing: pots were carefully arranged on a bedding of coconut husks, covered with dried grass, and the whole bonfire encased with split giant bamboo stems to hold in the heat.)

As the pots came from the fire, gum from the Pacific kauri was applied **(17)** to all except cooking vessels. Gum on charred clay-surface gave a black lacquered effect.

No account of the Fiji story would be complete without reference to the contribution of the New Zealand potters. In addition to the Travelling Exhibition which was exhibited at the Fiji Museum at the time of our visit, Doreen Blumhardt, Muriel Moody and Peter Stichbury gave three evening lecture-demonstrations, using a 50-50 mixture of New Zealand and local Fijian clays. Muriel Moody's sculpture **(18)** was inspired by Amele and her *kuro.* Pots by Peter Stichbury and Doreen Blumhardt are also shown **(19)**.

We end on what seems to us the most auspicious note of all. On the evening of the third demonstration a Fiji Pottery Society was formed. The objectives of its twenty foundation members: to foster the work of the traditional potters and to practise pottery themselves.

The potters of New Zealand wish the potters of Fiji 'Good Luck!' □



Karolina

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EXHIBITION OF INDUSTRIAL DESIGN

by Keverne Trevelyan

To stimulate interest in improving the design and presentation of New Zealand manufactured goods, Rothmans (NZ) Ltd., recently offered twelve prizes of $1,000 each. Products selected for the final judging in December are at present touring the country in a unique mobile exhibition, a review of which follows.

To take several NZR vans, couple them up, decorate and open them to the public at the nearest railway station is hardly a promising description of the way to go about setting up an exhibition but it has been done and with amazing success by Rothmans (NZ) Ltd. They deserve unstinting praise for the initiative and expertise which has gone into the creation of the travelling exhibition of entries in their first competition for Industrial Design Awards.

General view of the exhibition setting.

Showing in a train has of course created its problems, the greatest of which is probably the extremely limited space available for both exhibits and viewers. This, coupled with the widespread interest generated by the bright blue and gold train, meant that in Wellington at least, there was a constant stream of viewers passing slowly down the narrow coaches. This caused problems for the serious viewer who wanted to pause and consider, to handle (which was discouraged) and to evaluate the designs on display. However, if the setting of the exhibition is something of a compromise in this respect, its transportable nature and novel publicity value fully justify the choice of venue.

The exhibition design was well handled so as to present the exhibits in a setting of restrained colour and bright light. An impression of being slightly cluttered was perhaps attributable to the confined corridor-like space available. The judges could well have assisted the exhibition designer here by excluding a number of items which were not of a standard worthy of inclusion.

The best exhibits are of a very high standard, however, and would well hold their own in any international exhibition of industrial design. One of the finest pieces of design in the show is the Nova 70 Executive Lamp which is elegant and extremely well made. So too is the Ralta Portable Hairdryer which combines with its portability an appearance of good strength and stability – important visual qualities in both these exhibits. Other items that impressed were the light fittings by ACI and the carpet designs by Para Matchitt.

The furniture too is in general very pleasing, in particular the chairs entered by F & T Furniture, the Optimus packaged table and chair and the dining table and chairs by Rudolf Schwartz. These latter however, display a lack of attention to detail in that one notes the sharp edges of nuts and bolts abrading the textile covering of chair seats and backs. This is a minor but important fault in an otherwise very good piece of design and there is scope here for improvement at the prototype stage.

Readers of this magazine will be disappointed that the ceramics section of the exhibition is not stronger. It is to be hoped that in future years more potters will enter their work. Of course it must be understood that this is an exhibition of industrial design, not studio pottery. The line must be drawn so as to include only pots that are available in reasonable numbers, thus disqualifying entries which are essentially "one-off" pieces. However, having regard for this condition, many potters who design basic shapes which they then produce in limited quantities, could well be represented. Apart from the three fine entries from Jack Laird's Waimea Pottery there is little else of any importance. Crown Lynn's Yucatan tableware is at most inoffensive in design and is not likely to fire much enthusiasm in the eyes of discerning buyers. One item in the ceramic section should never have been included – the Titianware Tavern mugs which are examples only of bad design. They display clumsy shapes, slurpy glazes and dull packaging.

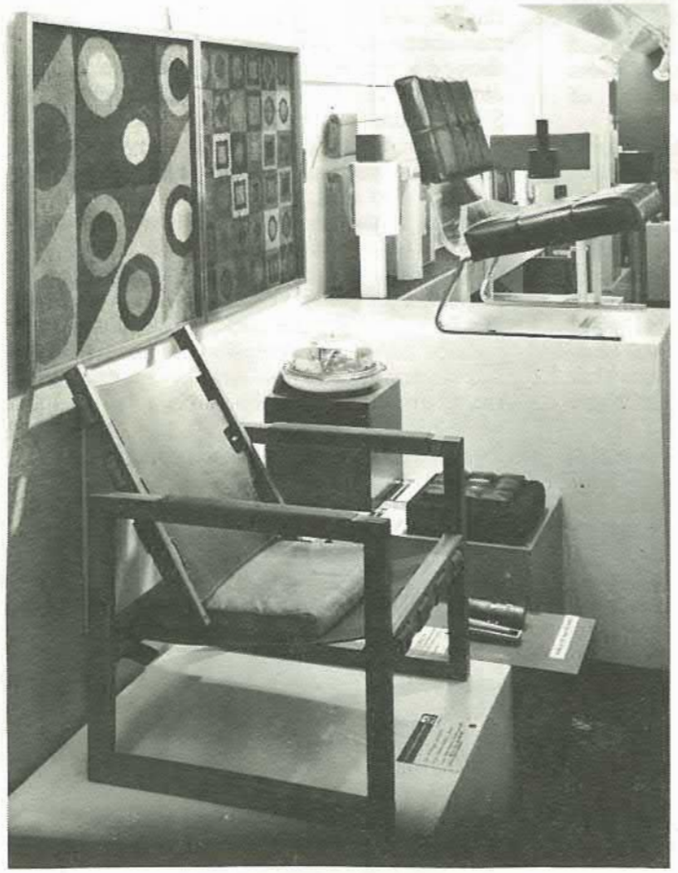
This problem of packaging was constantly in my mind as I viewed the exhibition. It seems this is one area of major weakness in our manufacturers' presentation. The exhibition showed a number of dreary, pedestrian package designs – the Hansells Gift Pack, Mini-drink Shrink Pack and Hawkes Bay Peach Pack in particular. Doubtless these all carry their contents with much success but in export markets a more dynamic approach to packaging is required if the product is to command attention. Graphic design, reliant as it is today on photography and clean, legible typefaces, conforms to an international style whether we like it or not and the packs in this show, with perhaps only one exception, present a dated and dreary face to the world. The exception, the Stanzol Chemical bottle is a ray of light in an otherwise dim lot.

This weakness in the design of graphics for packaging is, not surprisingly, repeated in the many products of otherwise good design whose trade names and labels are a blot on their appearance. Illconsidered lettering is evident in many cases – the Busy Bee floor polisher-scrubber and the Ezyhoe garden tools being the worst offenders. It is the totally designed product that commands respect, where every element is in harmony and contributing to the overall appearance. Labels, tags, trademarks, packaging and advertising material must all bear the designer's influence if a product is to warrant attention in an exhibition such as this. A product worth noting for its restrained use of lettering is the Kent Spaceheater and another

whose trademarks are appropriately treated is the Masport Rotary Mower. Another notable exhibit that really promises to improve the visual environment is the Ensign Sign System. This restrained and pleasing range of black-on-white signs in crisp, modern Helvetica typeface, deserves an award for the contribution it can make to the appearance of our public buildings.

Congratulations then to Rothmans for offering their generous prizes, assembling this fine exhibition and touring it round the country. It is only in a collective display such as this that we can clearly see the strengths and weaknesses of industrial designers in this country. This show will surely prove a stimulus to those whose products do not measure up and the fine setting given the entries is providing well-deserved publicity for those who are setting better design standards. The exhibition is at present completing its North Island itinerary with stops at most railway stations en route to Auckland where the judging of the award winners will be completed early in December. □

A group of exhibits; *foreground,* chair designed by Peter Hansen; *on the wall,* carpet designs by Para Matchitt. *Photos by courtesy of Rothmans Ltd.*



Letter from Darwin...

by Alister Hallam

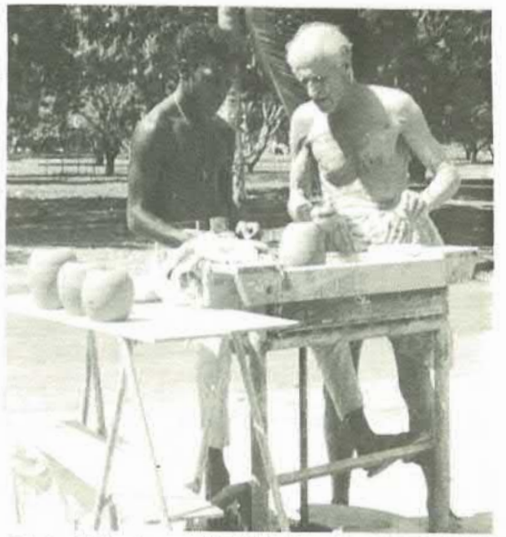
Darwin is a place of contrast; one finds the affluent Australian living in the atmosphere of a wild west boom town – with the horses replaced by expensive motor cars. Cultural activity here in Darwin tends to be concerned, in the main, with joining the decaying Holdens at the local drive-in cinema, or with 'going bush' by four-wheeled-drive vehicle to exotic sounding places like JimJim, Oenpelli or Yirrkala. Darwin has a cosmopolitian air. Being almost unique in that its territories are English speaking and lie in tropical latitudes, it has attracted people of many nationalities.

In the past the Aboriginal has remained insular by virtue of his ability to retreat in the face of an expanding white culture. Now economic interest in the mineral wealth of his territory has served to spread the sphere of western civilization, to the extent that there is nowhere left for the Aboriginal to go. In order to help the Aboriginal make the transition from a primitive to an urban existence Aboriginal settlements are maintained.

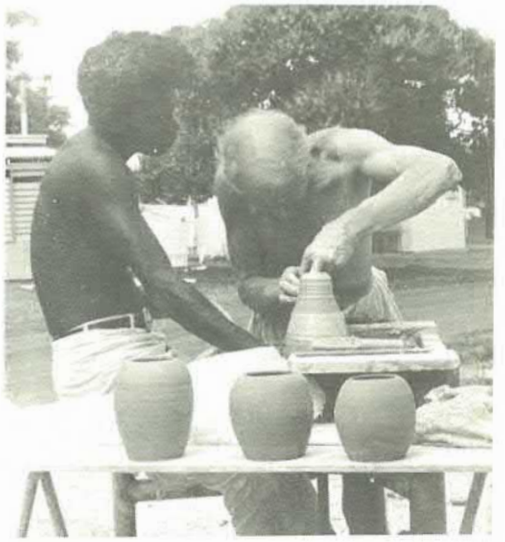
Bagot Aboriginal Settlement is rather like a university for those Aboriginals who wish to "go urban". There are three stages of housing, and an Aboriginal attracted by town life first learns to live in a stage one house before passing onto the more demanding disciplines of stages two and three. This course is not so much difficult as it is time consuming. It is like awakening a man from an eighteen hundred year dream.

It was to aid this transition that the Bagot Pottery was established. The Northern Territory Administration and the University of New South Wales (where Michael Cardew is a visiting Fellow) have combined in an experiment aimed at introducing the craft to a race of people who have no traditional pottery.

Six trainees were initially selected from the outlying missions and settlements and were brought to live and work at Bagot, under Michael. Their ages range from sixteen to twenty-five. They are brought in on a trial

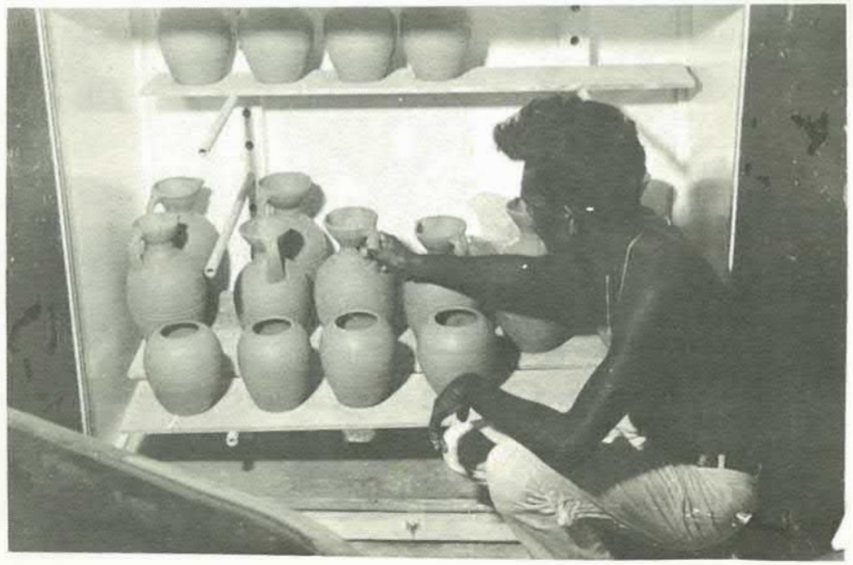


Michael Cardew and Eddie Puruntatameri bottle making.



Bobby Wunyimarra with pots.

Eddie Puruntatameri with Port Keats water-coolers.



Michael Cardew with Frank (a helper) in clay processing shed.

basis, as most of them came not sure about just what was entailed in potting, and are free to stay as long as is thought worthwhile. Two of this first group have since been replaced, and while those who remain are making good progress two of these have quickly developed, much to our delight, into very proficient throwers.

The Bagot Pottery has been well and thoughtfully equipped to produce its own clay from the local materials. The excellent throwing body is a rather complicated four ingredient mix consisting of a local clay, a shale which was found in the same profile, and two nonplastic materials. The kiln was designed and built by Ivan McMeekin who is a potter with the University of New South Wales and who is an ex-student of Michael Cardew. As Bagot is primarily a training centre the kiln is comparatively small so as to allow the trainees to get regular firing experience, and in the tradition of the African kilns that Michael has built, is wood-fired. To me it seems that nothing is quite so wonderful as a wood-fired kiln reaching temperature as the tropical evening settles with a brilliant sunset.

Shortly after arriving at Darwin, Michael was in Port Keats to interview prospective trainees for the pottery. While there he discovered a good swamp clay which he thought would be suitable for a "terracotta" water-cooler industry, similar to those which he had established in Africa. In August Michael and I returned to Port Keats to dig three tons of this clay, which was subsequently brought to Darwin as a sample. The clay has proved to be suitable for making the low fired, porous water-coolers as dug, and Michael is now preparing an estimate of the scheme for the Northern Territory Administration and for the University. This is an exciting prospect indeed, and the reaction of the Aboriginals to the sample water-coolers, both at Bagot and at Port Keats, has been most rewarding.

It is to be hoped that in addition to the unglazed 'terracotta' water-coolers, some glaze ware (which the Aboriginals at Port Keats call "cup-ma king") will be established there and that this, and the Bagot Pottery will flourish as an Aboriginal craft-based industry. □

THE ART OF THE POTTER

by Michael Cardew

The following is the text of a talk prepared by Michael Cardew for the Australian Broadcating Commission, to whom we are grateful for permission to reprint.

Being a potter – the kind they call an artist potter – I often find myself wondering: Is pottery an art, are artist potters really artists? The only answer I can make is "Yes", but only if you interpret art in a rather wide sense.

We seem to be living in an age when art is somewhat in eclipse. In the great ages of art – for instance in the 15th century in Italy – painters and sculptors were part of the central stream of civilization, whereas, nowadays, artists are just rather eccentric phenomena, appearing, shall we say, or floating, in the eddies of the mainstream of civilization – curious by-products of the main line of civilization, rather than essential ingredients of it. They don't provide the mainspring in the way they did in the past; and one result of this is their work is not participated in by the main body of the whole population. To a great extent, it is produced for in-groups, and so it has a tendency to become more and more subjective, less and less accessible to the ordinary mortal in the street.

Certainly, the arts have always got to be innovating, and, if you innovate very quickly, you will be rather difficult to understand. Some of the innovations which we may find incomprehensible today, may be more easily understood by our children or by our grandchildren. But all the time that they're innovating, and however much they innovate, they've still got to be able to communicate, and there are a great many people – I suspect they're most people – who would say that in modern painting and sculpture there's a kind of failure to communicate; people in general don't feel it's a necessary part of their lives, as they did in the great ages of the European past.

Well, am I therefore trying to say that there's no great art being produced today? Quite the contrary! Art is absolutely indestructible; the only thing is, it takes different forms in different ages; and in my opinion, the great art of today is Engineering. We can see its masterpieces all around us. New masterpieces are continually being produced. You can see them appearing almost every day in one or other of our great cities, or in the countryside. I am talking about things like motorways and freeways, and airports and great bridges and tunnels and fly-overs and skyscrapers and cranes and harbours, and – you can go on forever – electric power cables. All these great things are what I would call "public art", and that is a rather important distinction. What I mean by "public art" is, I mean they don't exactly lend themselves to do-it-yourself enterprise.

It must be very exciting and satisfying to be actually working on one of these great public works, but not very many of us can do that, and, on the whole, they don't give any scope for individual expression, for private perception, or individual sensitivity. On the whole, they don't give us scope for our hunger for skill, and our instinct for creativity. This hunger for skill is a very important thing, because, if we don't take care of it, our instinct for creativity will be frustrated, because it is the skill which makes it possible for people to be creative. I would say that skill is, as it were, the channel along which your creativity can flow. Without the skill, it will be dammed up.

That is what makes so many people want to be potters, or home potters, and the same thing that makes people want to produce pots makes other people want to have pots, and use them, because in their homes the utensils become boring if they're absolutely – all of them – standardised. No doubt, one wants many standardised things in a home, but if everything is standardised and mass-produced, it is a bore, and we want to have something that is personal.

Alright, then, now let's suppose you've decided to learn to make pots. Most people make up their minds at first to do it the easy way, because it seems to be going to be very difficult. You start off by buying the clays ready mixed in plastic packets, and you get ready-made glazes and you buy a prefabricated kiln. Then, you just do the making part, and that is hard enough. But if you stay at that stage, you find, sooner or later, that your pots are only one remove away from the impersonality of the standard things. They're only partly made by you. A pot is also the result of the clay it is made of, the chemistry and physics of its glaze and the kiln it is fired in.

Now, if all those things – the glaze and the kiln and the clays – clay mixture and everything – if they're all prefabricated and standardised, the pots won't be so satisfying. They'll be less satisfactory as a substitute for the anonymous utensils, and, in fact, they will fail to be works of art: they'll fail to be the works of art that they have a right to be, because they won't be personal enough. So, if the pot is deprived of its personality by all these short cuts, I have noticed that many potters, at that point – they feel it; they feel there's something missing, and they try to replace it by what I would call a deliberately-willed injection of personality; and that state produces the eccentric pot, and also produces the rather pretentious claim by many potters that they're as good as sculptors. Maybe they are, but I don't know. But I think it is rather pretentious; I think they ought to be just potters.

If you want pots to be satisfying; if you want them to have true personality – which is what we all do; the way to set about it is to improve your skill and improve your craftsmanship. I don't mean craftsmanship in the narrow sense, but in the widest possible sense – not only manual skill and dexterity, speed, and efficiency and all that; not only this manual skill, but also mental skills. You have to improve your knowledge about clays and clay-mixtures and clay mineralogy, and geology and physics and chemistry for glazes, and the theory and practice of firing, which is all physics and chemistry as well. All those things sound irrelevant to art, but they're not. You won't be able to learn all these skills quickly or easily. You'll find yourself acquiring them little by little – a snippet here and a snippet there. You'll acquire them as and where you begin to feel the need for them – which is exactly what I did. I acquired them little by little, as and when I felt the need.

Now, when you get to that stage, and you're paying more and more attention to all these things, you'll probably feel less of a compulsion to stick on to the pots all those funny, gratuitous, superfluous personality touches, because something will be happening to your pots, and you'll be finding out that the pots are more truly personal. They're acquiring what I would call real character, instead of artificial eccentricity. And so, perhaps, if you're lucky, you may wake up one day and find that you're a professional potter, rather than an amateur, and if you are, you'll be supplying homes – your own home and those of your customers – with useful pots which satisfy you, and yet they don't have to shout all the time, in order to draw attention to themselves.

Well now, is that kind of pottery art? What is art, anyway? There must be – I suppose there are – hundreds of different definitions – possible definitions – of what art is, but right now I'd like to use this one. I would say: Art occurs whenever you feel that materials, material things, have a life of their own, and have a power to affect us, and you use this medium, these materials, to express something about the nature of the world, or, if you prefer, about the predicament of man in the world. In a way, I mean, McLuhan's famous phrase, "the medium is the message", is true for every art. The expressive power of a pot does not come from some decorative, or distinctive, or eccentric feature which you add to it, but it comes from its being the material treated with proper respect and proper sincerity. It has what I call an "intrinsic" beauty.

It is just like handwriting. When you were little and were being taught to write, they didn't tell you the great thing to aim at was to make the writing express your personality. Your personality is something much too big, and something much too mysterious, to be treated in that way. They taught you skill, or craftsmanship; they taught you to make your writing legible. But here's the point: your handwriting will always be yours; skill is not going to rob it of its personality; skill is going to make it possible for your personality to flower and to be seen; and the result is that nobody can imitate another man's handwriting,

and I don't believe it's possible for anybody to forge a signature perfectly.

So, if you want your pots to express your personality – and who doesn't? – the best way is to make them as plain and useful as you can. Know your clays and try to understand them, treat your clays as they deserve to be treated – with proper respect. Nothing is going to stop your individual personality from appearing in the result. They'll be as individual and unmistakable as your own handwriting. Only, for heaven's sake, try to make the handwriting legible!

Now, pots made in this spirit can, in fact, be works of art. I'd personally say they're humble, or minor, works of art – I'm perfectly willing to say that; I don't claim any more for them, except I do think they're also very important works of art, for three reasons :–

First, they're important because they come right into your home and your daily life, and, like no other art form, they come right up to your lips about twenty times a day.

Secondly, they're important because you and I and very many other people are capable, if we set ourselves to work in the right way – we are capable of producing this kind of art.

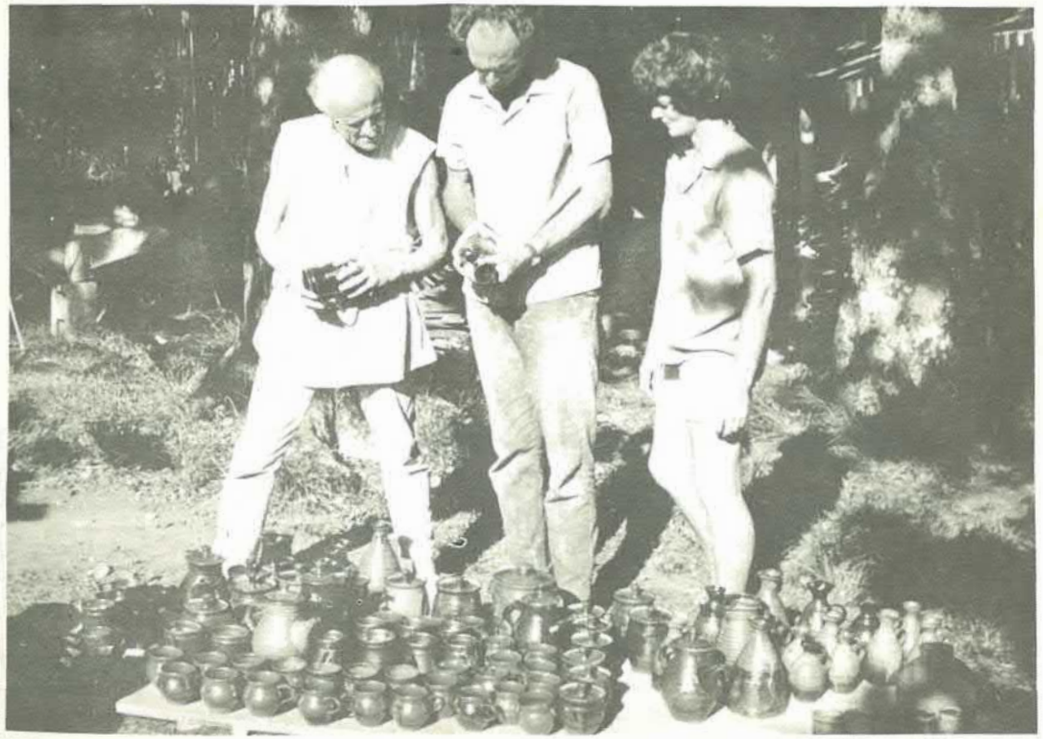
Thirdly, they're important because it's an art that is curiously influential in producing human happiness and because, in this way, we get our chance to be creative.

To be creative is an instinct, and, like any other instinct, if we can't give it expression, it will go sour on us and mean, and end up by destroying us.

I would say if the human race can't find a way to be creative, can't learn to be happy, there's no hope for us. We shall end up by destroying ourselves just out of sheer spite at our own inability to be happy.

I think that must be what a potter friend meant when he said to me the other day that he thought pottery-making was "the only hope for the human race", and I think he has something in what he said. I can certainly recommend it as a recipe for human happiness. □

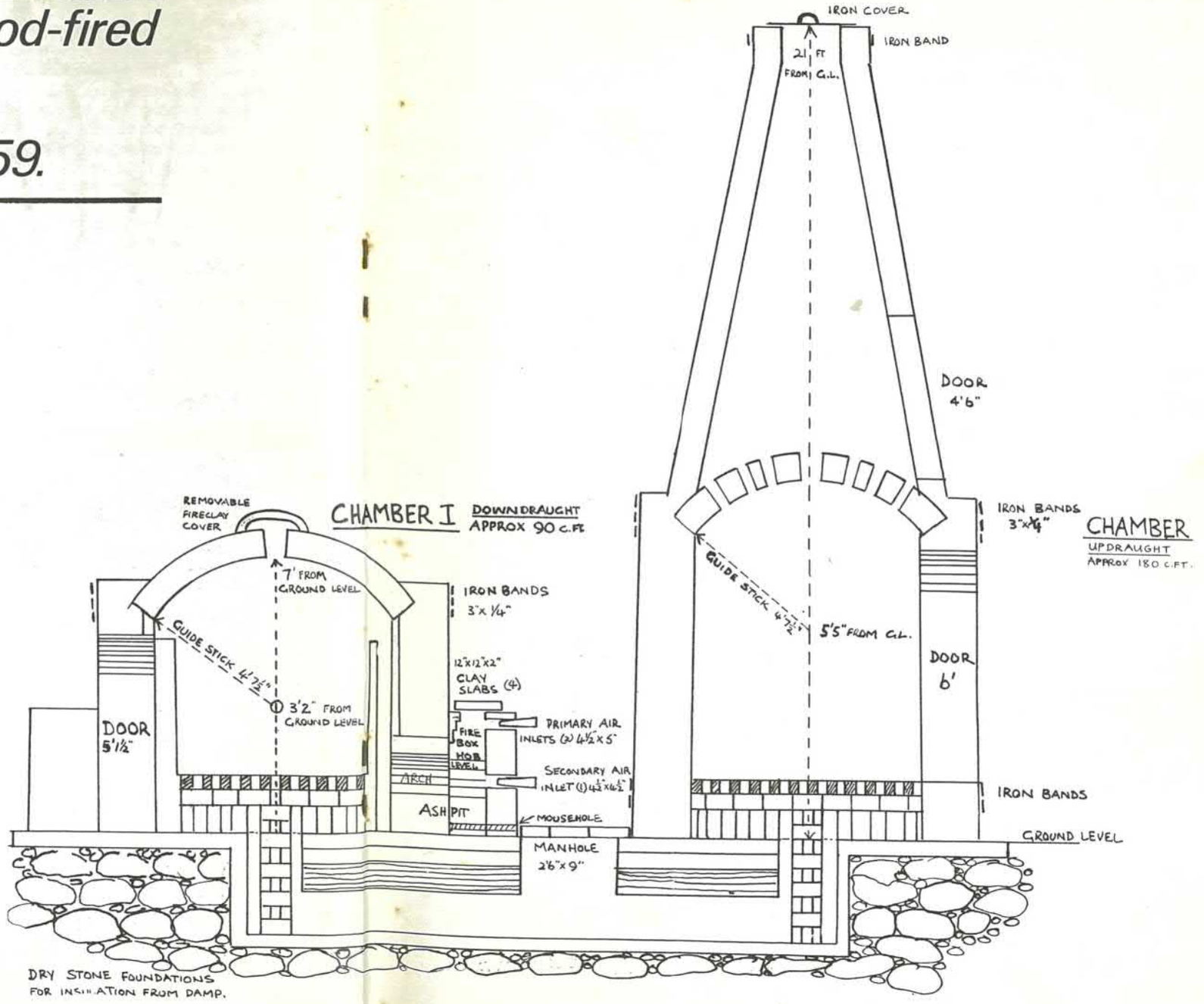
Michael Cardew photographed during his recent visit to New Zealand.
Opposite page, bottom: Cardew with Peter and Diane Stichbury.



Michael Cardew's wood-fired downdraught kiln.

Abuja, Nigeria, 1958-59.

Sectional Elevation



PETER KNUCKEY

RETURNS FROM JAPAN

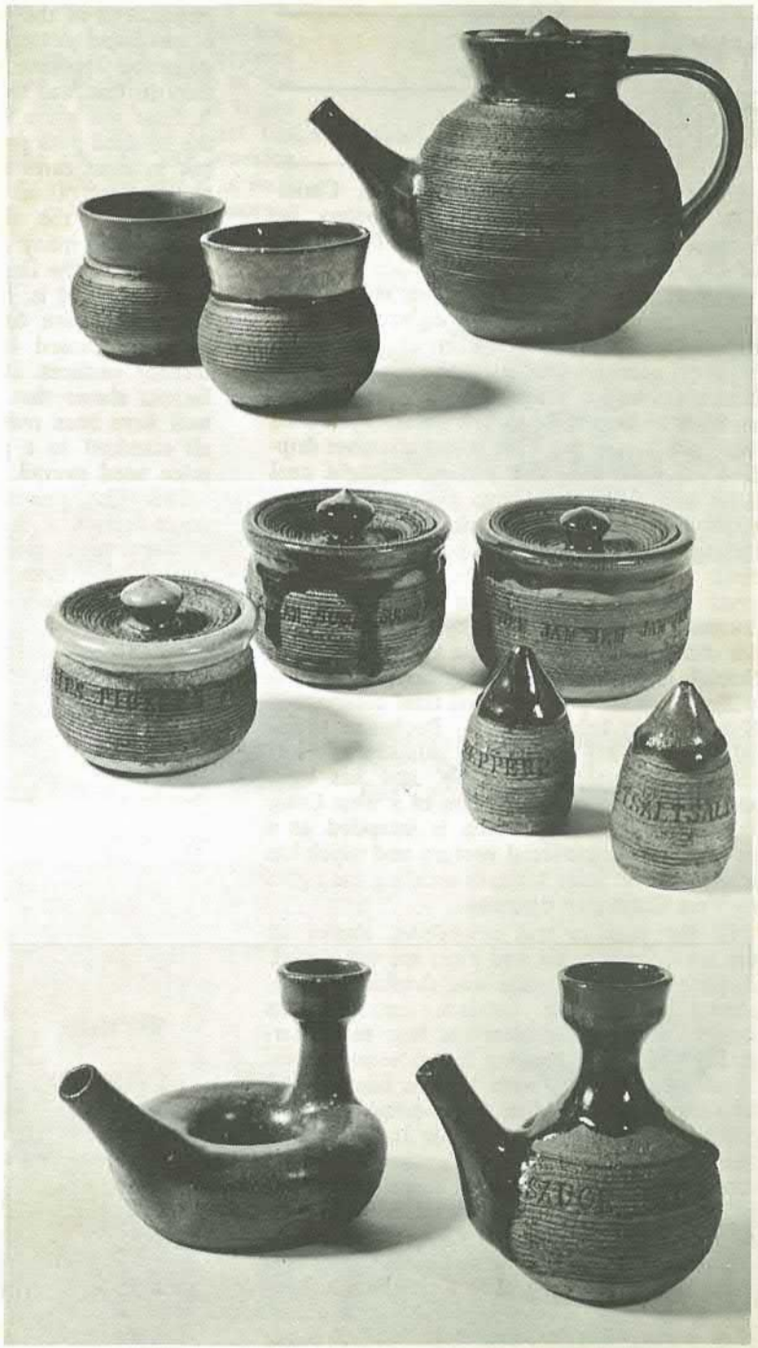
A recent exhibition of interest at the John Leech Gallery, Auckland, featured pottery and sumei painting by Peter Knuckey who has recently returned to Auckland with his Japanese wife, Hisako. This display was the result of a stay of over three years in Japan where Mr Knuckey studied under Yeizi Matsushima, president of the Yokohama Potters' Association, and Takeichi Kawai of Kyoto, a member of the Folk Craft Potters of Japan.

After he had been in Japan, for about a year Peter Knuckey built his own studio in Kyoto and worked there on his own for the next two years, firing his pottery in a rented section of Mr Kawai's large climbing kiln. In 1967 he exhibited his pottery in the Takashimaya department store in Tokyo and also demonstrated potting on the Japanese national television programme.

The pottery exhibited was all made and fired while he was in Japan – using, of course, Japanese clay and glazes – and as might be expected the influence and impact of the Japanese craftsmen is very apparent in Peter Knuckey's work. An interesting finish which he has used effectively is the shino glaze – a white glaze with a soft texture which takes a subdued decoration very well.

At present Peter Knuckey is very busy setting up his own studio and building his own kiln in Auckland. □

Photographs show pots by Peter Knuckey from the exhibition at Takashimaya department store, Tokyo.



YVONNE RUST EXHIBITION

by Nola Barron

Early in September, Several Arts, Christchurch, held an exhibition of pottery by Yvonne Rust and the weaving of Frank Mol of Dunedin.

Yvonne showed 94 pieces of her recent work made with West Coast clays and glaze materials. In setting up her pottery in an abandoned brewery near Greymouth, she has overcome difficulties which may have daunted most of us. With the help of Barry Brickell and interested local people she has built a two chamber drip-feed oil fired kiln and a down draught coal fired kiln for salt glazing. During the major earthquakes in May, the stoneware kiln was damaged and some of the pots waiting to be fired were broken. The firings are arousing great interest in pottery in Greymouth and Yvonne is fostering this by holding classes for children and adults at the Greymouth High School, giving every encouragement to students willing to make pottery a full time occupation. She has also helped Mr. R. Buchanan to establish a centre for the preparation of local clays and materials for sale, and has been instrumental in the formation of a West Coast Potters' Association, which is intended as a co-operative commercial venture and which has already taken steps towards securing the rights to West Coast clay deposits.

Of the pots in this exhibition, almost all are for domestic use and most are salt glazed. A wide range of storage and drinking vessels, several lanterns for outdoor use, generous candleholders and goblets and four very interesting groups of hanging lamps were shown. A set of pannikins with thrown handles and two small tea caddies were delightful. The throwing indicated great vigour and heart and was very adequately complemented by the salt glazing and use of local rocks for colour; indeed many of the forms would have appeared out of character with any other treatment.

The salt glazing gave rich effects varying from typical orange-peel to a translucent flowing glaze bearing resemblance to lead glazes. The earthy quality and bold use of finger impressions in the wet clay evoked the feeling of mediaeval pottery. In other cases the shapes suggested Japanese and Chinese influence, although this was not too consciously sought. A rimu ash glaze thickly applied to some of the oil-fired pots produced a good jade colour, but in most cases where this glaze was subsequently salt fired the extra fluxing action gave rise to the obvious difficulties. It must be said that many of the pots required greater attention to the finer points of finish. However a robust a pot is, in order for it to be a continuing pleasure to use, there should be no irritation caused by ill-fitting lids or rough interior surfaces. It may be an indication for furture shows that the number of pots could well have been reduced, thus lifting the overall standard to a point where a less modest price need prevail.

This first one-man exhibition involved a great deal of work, but through it all glowed a warm and generous character, sincerity, vitality and love.

Yvonne Rust with some of her exhibition pieces. Referring to the West Coast as a potter's paradise, Yvonne says, "It has the happy-go-lucky atmosphere of old New Zealand. It is like the very north of the North Island and the tip of the East Coast. It is not commercial New Zealand. Living on the Coast has really vitalised me and made me feel like working again. It demands a vital approach because it is such a powerful area as far as landscape goes and because there is so much to overcome." □

Photographs; *above and left* by Robert Prisk; *below* by the "Christchurch Star"; *opposite* by Barry Brickell.

11+1

INVITED POTTERS

BARRY BRICKELL
LEN CASTLE
ADRIAN COTTER
ROY COWAN
NEIL GRANT
JAMES GREIG
HELEN MASON
PATRICIA PERRIN
JULIET PETER
MIREK SMISEK
PETER WILDE

AND ONE BASKET MAKER
RUTH CASTLE

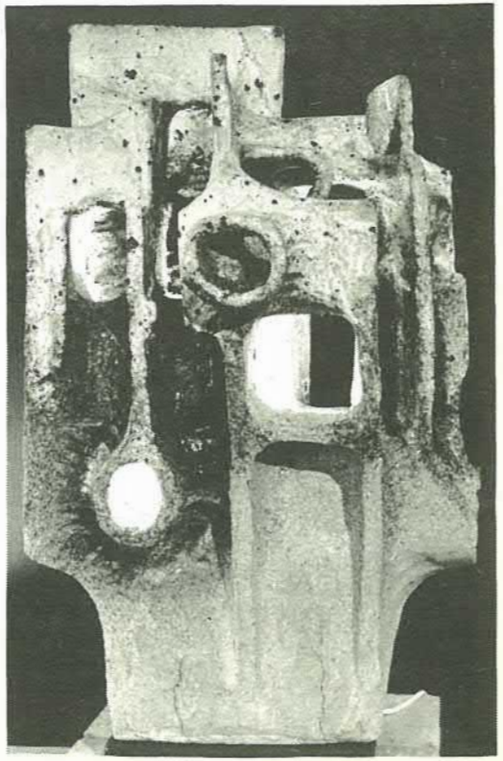
PALMERSTON NORTH
ART GALLERY
19th MAY
7th JUNE, 1968

Sunburst platter by James Greig

Lantern by Roy Cowan

Discoid vase by Len Castle

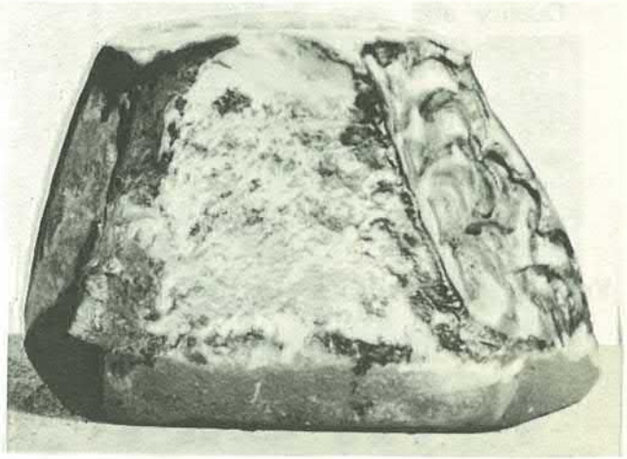
Photos: Stan Jenkins



Three of a set of six platters
by Mirek Smisek
Photo: Roger MacBean

ACADEMY SCULPTURE, POTTERY & GRAPHIC ART

We show here a few samples from the 1968 exhibition of Sculpture, Pottery and Graphic Art organised by the NZ Academy of Fine Arts.



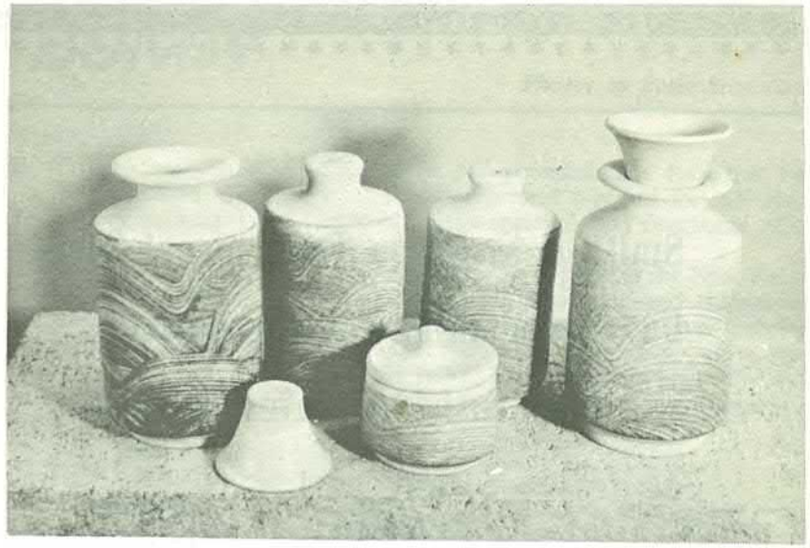
How big is a mountain? A sculptured trough by Joan Rout – barely 5" high but metaphorically vast, with snowfields, glaciers, etc.

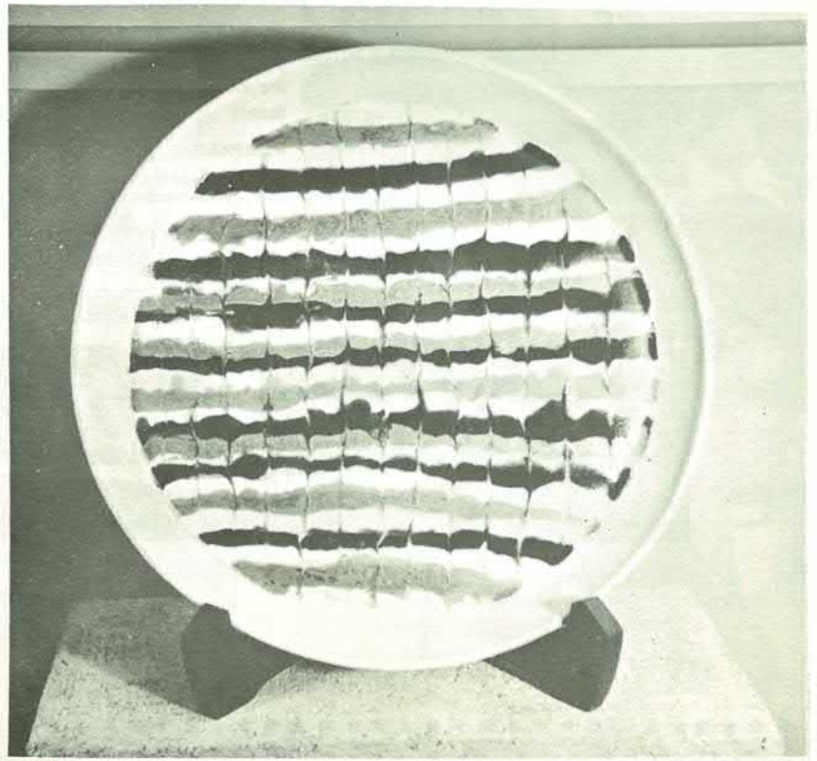
Vase, decanter and goblets by Christopher Vine.

Opposite page
Platter with banded and marbled glazes by Chris du Fresne.

Condiment set by Chris du Fresne.

Photos by Roy Cowan □





CLAIRE BUNBY

Photos by Peter Stenhouse

Claire Bunby is one of the few young woman potters active in New Zealand. She was first introduced to pottery making at secondary school in Auckland, and then participated in evening classes under the tutorship of Len Castle and Rex Head. After secondary school Claire studied at Elam School of Fine Arts for a time before deciding to become a full-time potter.

She is endeavouring to master her craft and develop the relationship with her material, clay, to its full potential. She feels that her work should represent a regard for individual expression, raw material, and functional efficiency.

Her first show took place at the New Vision Gallery, Auckland, in company with the painter and print-maker Malcolm Warr, and included a variety of domestic ware, lamp bases, tiles and tile relief. The exhibition was very well received by the critics. *continued→*

CLAIRE BUNBY
(continued)

Letter from Dunedin

by Beryl Jowett

This half year has been a busy and stimulating one for potters in the Dunedin area. In March we had a lecture and demonstrations from Michael Cardew. Members of the public as well as potters and a large contingent from Invercargill, warmed to the philosophy and potting skill of a very great man in every way.

A weekend school by Doreen Blumhardt gave us much help in just about every aspect of pottery in a very short time. Following a fortnight after Michael Cardew, this gave us all renewed enthusiasm, which is already evident in a freer approach and better craftsmanship.

Each month the local group has held demonstrations and invited talks by local potters. We are particularly grateful to Mr. Oswald Stephens, who is gradually passing on all his vast, carefully documented store of knowledge.

Our two new craft galleries, *"Dawsons"* and *"The Connoisseur"* are now well established, and providing interesting displays of pottery and allied crafts. Barry Brickell held an exhibition in *Dawsons* earlier in the year – beautiful, large salt glazed ware; also table ware which cried out to be used and handled.

Lawson Fraser exhibited pottery in the *Connoisseur* in September, it was interesting to see the results of his research into local materials for glazes. Earthy effects combined well with his excellent throwing.

An exhibition of architectural and decorative ceramics by our local President, Ian Grey-Smith, in the Museum Foyer attracted a large public and aroused much discussion. The combination of materials, wrought or forged iron, with plastics, glass and fired clay could lead to interesting developments.

At the time of writing, (October), Michael Trumic, is showing pottery at the *Connoisseur*, a combined exhibition with Barry Cleavin, print-maker. Every piece of Michael's bears the closest inspection, and there is great refinement in his work.

Parallel with all this activity, preparations have continued for the 12th Annual Exhibition of the N.Z. Society of Potters, a task which everyone has undertaken with gusto, and the pride of having the exhibition in Dunedin this year. These highly selective exhibitions can do much for pottery in New Zealand, and the contact between potters on these occasions is very valuable. More of the '12th' in the next issue of the *POTTER*.

And now we are looking forward to the OTAGO POTTERS GROUP'S own "4TH ANNUAL", November 25th – 29th. We are hoping the year's activities will be reflected in the improved standard. □

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P.O. Box 12-162
WELLINGTON NORTH

A considerable amount of mail is still being addressed to a Carterton box number, resulting in unnecessary confusion. Please ensure that your mail to us is correctly addressed.

SALT GLAZING WITH COAL

by Barry Brickell

Following queries on this matter I have the following information to offer, my experience being limited to down draught kilns of the natural draught type.

CHOICE OF FUELS

Pure bituminous or a mixture of bituminous slack and sub-bituminous lump coals are satisfactory. Bituminous coals of no. 8-9 swelling (West Coast coals) are best – refer to Mines Dept. analyses of closest available fuel. A mixture of slack and lumps is best. The sub-bituminous or hydrous coals must have low ash content – not above 2-3% otherwise clinker will form after prolonged high temperature firing. Slack is not wanted with this type of fuel, only lumps, ideally about 2" nut size. Sub-bituminous coals flame very brightly and quickly and the usual care should be taken at the water-smoking stage of the firing cycle. Bituminous coal is safer at this stage as its gas release is slower.

FIRING TECHNIQUE

I prefer to have on hand the two types of fuel. Up to 550°C bituminous (or 'slow') coal is safest and easiest. Thence, introduce the other and fire chiefly on this. *Complete* each stoking with adequate *bituminous* slack to seal firemouths. Sufficient bituminous coal to keep the fires open for maximum air flow is needed. As lump coal tends to burn more quickly, stokings should become 'little and often'. Occasional tests of the fire's openness and freedom from clinker or fine ash can easily be done with a bent iron rod or poker from underneath. Keep hot ashes raked back from the inner ashpit otherwise firebars may bend from overheating. Of course methods are modified for bituminous coal alone, but the same

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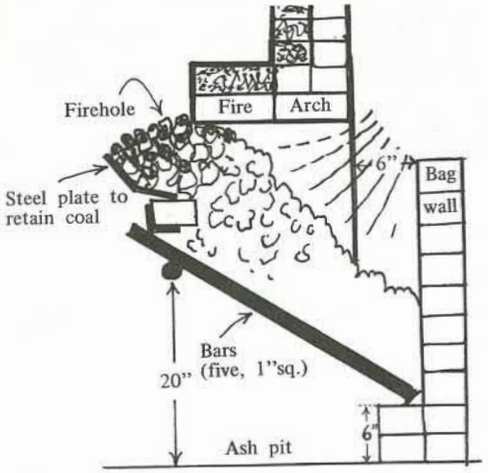
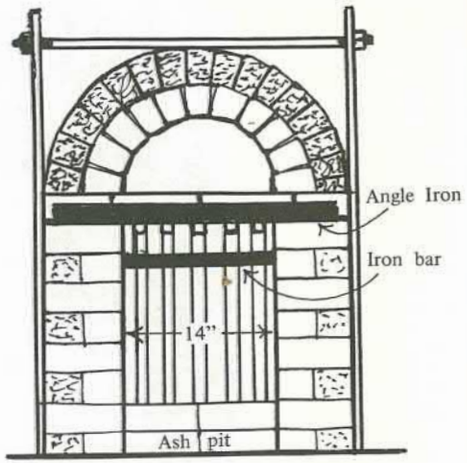
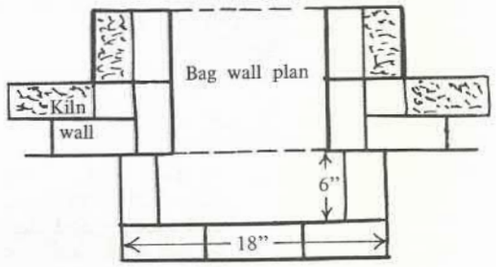


FIREBOX PLAN FOR SMALL KILNS





care to keep an open fire and well-sealed firemouth is essential. 1" square steel firebars spaced with 1½" gaps are best.

SALTING

A kiln temperature of at least 1250^{0}C is advisable. At 1300^0 or more, rich shiny or running glazes are possible. Coarse-grained industrial salt is best as it decrepitates (with much spitting noise) and flings itself about the firebox much better than ordinary table salt. Some books insist on draught reduction at salting, but my experience shows that this dulls the fire and knocks back heat. Introduce about 2-3lb of salt per stoking, using a small hearth shovel, one to the left and one to the right, with a vigorous thrust so that the salt lands on incandescent fuel at the back of the firebox. By allowing the fire to burn bright and low, then quickly salting, followed by a good quick stoking, temperature should be adequately maintained.

The quantity of salt which will be required is highly variable and depends upon individual taste and purpose. Much of my salting is done over lightly sprayed stoneware glazes. I therefore tend to use minimal salt which prevents excessive running, about 1/5lb per cubic foot of kiln volume. For adequate thickness and texture over raw clay, up to 1/3 or even 1/2lb per cubic foot can be applied. Salting will take from one to two hours, during which full temperature should be maintained. A common practice is to add 10% borax to improve gloss at lower temperatures but I have no experience of this. Salt glazing over stoneware glazes can be rewarding colour and texture wise particularly in cooler parts of the kiln. There appears to be no disharmony between salt and stoneware glazes.

After removal of pots from the kiln, exposure to rain for a few days, or hosing will remove the dulling salt 'bloom' which can form on the fresh cold pots. Salt glaze is peculiar in its austerity, richness and sympathetic natural quality. □

P.S. Time is very limited for me to deal with much correspondence over this information. All essential aspects are covered, but the whole operation is still carried out in this manner at some industrial brick and pipe works. *B.B.*

THE BREATHING KILN

by Roy Cowan

The kiln designs which have been published in this magazine have been based upon calculations checked by operations of kilns of a range of capacities. While series of dimensions have been given, which, if followed will at least ensure that the kiln (if not the potter) is capable of firing the ware correctly, the basis in calculation has not been laboured. Well, now it is going to be laboured! With Natural gas on the way, we have a major addition to our energy sources, and potters and engineers may want to know more fundamental things about the design of high-temperature equipment, so that they can design for themselves. We have a generation of well-experienced kiln operators who may make constructive use of a more complete understanding, and there are other approaches to the whole art of firing, using other fuels to produce results quite distinct from those of the present earthenware and stoneware routines, which answer to the same laws, wood-fired earthenware for example.

An imaginary 'perfect' firing would take place if we could immerse our pot in a stationary hot atmosphere of even temperature and radiating uniformly in all directions. If this atmosphere begins to flow past the pots, inequalities in the effectiveness of heating appear. Where the gas flows more rapidly over the surface, the slightly cooled layer of gas next to the surface is more rapidly remitting power of various kiln materials and surfaces has also been established, and the quantity of heat produced by combustion of known amounts of fuel and air, and carried off by hot flue gases, is known accurately. From all this, a distribution for the potter's kiln comes out like this –

To contents, including furniture- 5%
To, and through, kiln structure- 35%
Up the chimney- 60%.

With the relatively small kilns used by potters, there is a rapid change in heat economy with size. A nine-inch thick brick wall which is at 1300^{0}C on one side will rise to as much as 250^{0}C on the other and will radiate heat away at the rate of 2500 B.T.U. per square foot per hour. A cubic kiln of 24" side internally will have a surface of 24 sq. ft and 8 cu. ft capacity, while one of 48" side will have four times the surface but eight times the capacity, so, small kilns must be much more carefully insulated. Materials vary in their capacity to absorb, transmit and radiate heat. New firebricks of light colour absorb less heat than dark bricks, a state that can be promoted by the use of white kiln wash.

The interior of the kiln is held at a higher temperature relative to that of the enclosing bricks. On the outside, red bricks radiate off heat at about twice the rate of pale firebricks. Plating the exterior, with placed by gas at the full temperature and there is greater heat application. Within limits, the resulting variations are often an asset, but too uneven firing means spoilage. At the centre of kiln design and of the arrangement of the contents, there then lies the need to secure as uniform a gas flow as is possible, and as slow a rate of flow as is consistent with maintaining the heat balance. The ratio of air to fuel is fixed within narrow limits. If the air flow is insufficient, the amount of fuel which can be fed may be too little to allow a given temperature to be reached; increasing the fuel feed will alter the atmosphere but without the evolution of more heat, in fact, there may be less.

If the air flow is too great, there is usually no difficulty in restoring the correct fuel-air balance by increasing the fuel supply, giving a fast, but uneven firing, usually characterised by zones of reduction and oxidation. In an abbreviated firing there will possibly be less fuel used, but more generally, the kiln which has too great an air flow will be heavy on fuel, as an excessive volume of air has to be heated to maintain temperature conditions.

WHERE DOES THE HEAT GO?

There are a number of studies of Fuel and Furnace Technology which give values determined by research for the amounts of heat required to raise the temperature of ceramics, including bricks. The heat trans-

continued→

use of aluminium or a light coloured finish, will reduce heat losses to about half the value for exposed brickwork. The air space within a double skin of brickwork reduces heat transmission. Multiply this air space many times within the porous structure of insulating bricks and you have a wall which will contain heat as effectively as two or three times the thickness of solid brickwork.

The above provides a quick look only at the kiln as a heat-bottle and the 'Potter' will probably have more to say on this aspect when dealing with gas kilns. For the moment, we concentrate on the 60% of the heat production which flows right through the kiln.

HOW MUCH FUEL?

At the beginning I mentioned the advantage of a slow-moving hot atmosphere, and the existence of fixed ratios of air to oil or gas for correct combustion. If we can discover the correct rate at which the hot gas should move through the kiln, we also discover both the rate of flow and the total quantity of fuel required. The rate is known – 3 feet a second. This has been established through accumulated experience in industrial furnace and kiln work (see the discussion in 'A Potter's Book'), and the same figure is approached in calculations based on the heat requirements for firing the kiln contents (the 5%). I propose to start at another point by taking a kiln of standard type with a glost chamber of 45 cubic feet, a cube of 42" side plus arch. If we imagine this as an empty tunnel of 3' 6" side or of 12¼sq. ft cross section, through which a breeze is flowing at 3 feet a second, the volume of gas flow is 36¾ cubic feet a second. However, the actual kiln is packed, and in addition there are incoming streams of gas which occupy part of the room. In all, the proportion of the section given to uniform outward flow is about 40%, which reduces our figure of 36¾ cu. ft sec. to 14.7 cu. ft sec., about 53,000 cu. ft an hour.

One pound weight of oil requires 14 lb. of air, equivalent to about 195 cu. ft of combustible gas. On burning, this mixture goes from say 15°C to 1500°C, and as it is free to expand, the volume increases.

The new volume is proportional to the temperature, provided the figures are compared on the absolute temperature scale which starts at 273 degrees below 0°C. On this scale, signified by the letter K, 15°C becomes, 288°K, and 1500°C, 1773°K. 195 cu. ft of mixture at 288°K, then, expands to fill about 1200 cu. ft at 1773°K.

We found that our kiln required about 53,000 cu. ft of hot gas an hour. Dividing by 1200, the figure for one pound weight of fuel, we discover that the kiln will need just over 44lb of oil fuel an hour at full performance, which is just over 5 gallons.

Well, what do such kilns do? Advanced at 100°C an hour, they reach Cone 10 in 12-13 hours, and burn 45 gallons of fuel in all. In the first half of the time they are on reduced input and use 15 gallons, and in the second, 30 gallons, five gallons an hour.

In passing, the 44lb. of fuel per hour equals nearly 1lb. per cubic foot and this will yield about 18,000 B.T.U.* per cu. ft in an empty kiln and over twice this figure in a well packed kiln.

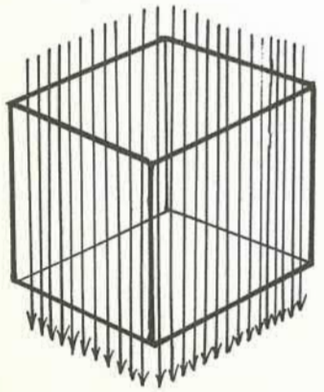
Following similar steps, we can establish in advance what any size of kiln will require in both air and fuel. The popular 18 cu. ft model, for example, should fire to Cone10 on 20 to 23 gallons, while a 75 cu. ft kiln will do it on 60-65 gallons, the improving figure per cubic foot being due to the changing volume-to-surface ratio already noted, and perhaps to some greater efficiency possible in the stacking. Later, we will convert these figures to the natural gas equivalents and so determine the supply rates for gas kilns.

I should add that the total consumptions are based on a standard firing at 100°C an hour straight to 1300°C. Sustained soakings or forcings-on are extras.

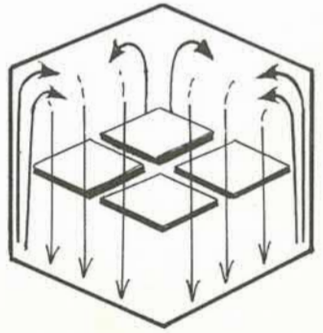
In Industry, the approved way to fire a furnace or kiln is to pump the total fuel and air requirements, without reliance upon natural draught. Natural draught occurs when a column of gas in a chimney, lightened by heat expansion, floats up on an inflow (at the firemouth) of cold air. Industrial furnaces therefore contain a slight pressure, and are enclosed against leakage. Care is taken to use the heat fully, as it is wasteful to use it in the production of draught.

The regime for the potter-constructed kiln is quite different. A small part, if any, of the combustion air is pumped. Some internal pressure is generated by the firing expansion of the gases, most strongly in the jet-fired type, but natural draught is important, will in fact play a main part in controlling the behaviour of the kiln.

The empty tunnel



The actual kiln



ABOUT CHIMNEYS

Just as there is an ideal speed for gas flow in the kiln, there is one for flues and chimneys. For the latter the controlling factor is the friction of the gas against the walls of the duct. Little effort is needed to drift a gas through a large bore duct, while real pressure would have to be exerted to force the same quantity through a small pipe. For large industrial chimneys, the rate can be up to 60 ft. sec., for small chimneys, 15 ft. sec. To find the right size, that is, cross-sectional area, of the chimney, we take the gas volume as calculated from the glost chamber dimensions, correct the figure to suit the lower temperature at which gases leave the kiln, and so find the chimney size which will give 15 ft. sec.

Tests from cones in the 45 cu. ft kiln indicate a temperature on the floor at the outlet between 1220° and 1250°C (1523°K) at which level the volume of 53,000 cu. ft of gas becomes about 45,500 cu. ft an hour, or 12.65 cu. ft sec., a volume which will flow through a duct of ten inches square at 15 ft. sec.

Here is an interesting point. We have taken the gas straight into the chimney at high temperature. If however a biscuit chamber is introduced a marked fall in gas temperature is obtained, and for a new outlet temperature of 700°C a chimney 9" square inside is right. Although the inch difference seems inconsequential, the real comparison is in the areas, 81 as against 100 square inches, and the nine inch chimney, applied straight to the glost chamber, may slightly retard the full firing of the kiln.

One might imagine that the very high temperatures of the kiln discharge would result in tremendous draught. In fact, there is a definite limit to this, for as the flue gases become hotter, they also become more expanded, and so less actual substance is being moved at a given flow rate. This expansion effect catches up on the heat effect, so that from about 280°C flue gas temperature upwards, no further flow increase occurs. All those flames from the stack too!

As 280°C outlet temperature will come up early in the firing, the kiln will come on to full draught perhaps before the potter is on to full firing rate, disturbing the early heat progression. Counter by use of the damper.

What is the effect of chimney height? As the chimney is extended, the friction effect increases, limiting the gains in draught power. The rule is that the displacement will change as the square root of the change in height, that is, to double the flow from a chimney one must increase its height by four times, so, in building a kiln you have a choice between a short chimney of ample bore or a tall one and the dimension that really must be right is that of the cross section, particularly in the first few feet where temperatures are highest.

Horizontal ducts add to the drag but not to the draught and can be given a larger section than the correct one for the chimney without affecting the result.

At last! - a fully adjustable chimney

SALT GLAZING KILNS

Some advocate closing dampers on salting, to retain the vapours in the kiln. This practice has caused difficulties in high-temperature oil-fired saltings. Applying the damper will bring on intense reduction and, leaving aside the question of the palls of smoke, there is a loss of flame heating effect. As the salt reaction itself requires heat, the operation takes place against a rapidly falling temperature, so salt applications must be alternated with periods of recovery. If however, the kiln chimney is given up to 50% more capacity than the normal amount for the kiln size, and the extra is 'switched on' when salting begins, the firing continues unimpeded either by damping or the extra gas volume produced by the salt. Salting can be almost continuous and the highest temperatures can be maintained, with rich results. This method produces a marked lengthening of the flame, and while biscuit may be fired in a second chamber, this chamber should be by-passed for the salting to avoid flashing or over-firing.

From the figures for the heat content for natural gas, given in Vol. 10 No. 2, it will be seen that gas will deliver the same heat output as oil about 90% of the hot gas volume, but the margin of capacity in flues would be taken up if the higher temperatures available are reached. For firings to the usual temperatures some continued damping may be needed to avoid excess-air conditions.

KILN MEASUREMENTS

Flue and chimney sizes are given in terms appropriate to brickwork where possible, and are oversize, generally requiring the kiln to be damped down, or a controlled opening could be left at the base of the chimney, which can also be of 10% greater area when drawing direct from the high-temperature chamber. Biscuit chamber assumed to be of same capacity or within 75%. □

Glost chamber, cu. ft.	8	16	20	45	75	100
Flues to Biscuit, two.	4" x 3"	4½" x 4½"	6" x 4½"	6" x 9"	9" x 9"	three, 8" x 9"
Chimney.	6" x 4½"	6" x 6"	6" x 7½"	9" x 9"	10" x 12"	12" x 12"
Total oil, gals.	16	22	23	44	64	75
Gas. cu. ft hr.	280	392	410	785	1196	1420

*British Thermal Unit.

NEWS OF PEOPLE, POTS & EVENTS

Dr W.B. SUTCH

Potters all over New Zealand are sorry to hear that Dr W.B. Sutch has been ill in hospital for some time. He has done much to help and encourage potters not only through his writing but in opening many exhibitions both national and individual, besides being instrumental while in the Department of Industries and Commerce, in purchasing many pieces of pottery for a variety of purposes, such as overseas trade missions.

His understanding, perceptiveness and knowledge of good design has helped so much in raising standards in New Zealand that we potters all owe him a great deal and we continue to need what he has to give. We wish him a speedy and full recovery.

OUR MAN IN MEXICO

John Stackhouse, who gave much time and energy to the *POTTER* secretarial work last year, is now in Mexico as a follower of the Games and the less publicised Cultural Festival, which takes place at the same time.

DRIFT TO THE NORTH

June Black, well-known Wellington artist-potter and maker of "Long Bods" is the latest to pull up roots and depart north, to Auckland. June and her husband, Robert, have purchased a property with fine pohutukawa trees, at Mairangi Bay, on the North Shore.

TOWARDS EXPO 70

An advisory group has been appointed to assist the staff of the New Zealand Commission for Expo 70 with the design of New Zealand's pavilion and its displays. Included in this group are two potters, Len Castle of Auckland and Doreen Blumhardt of Wellington and two painters, Peter McIntyre of Wellington and Milan Mrkusich of Auckland.

In addition to representatives from the NZ Institute of Architects and the NZ Institute of Engineers, other members of the group are Mr J.M. McEwan, Secretary of Maori and Island Affairs; Mr James Coe, head of the Wellington Polytechnic School of Design; Mr Raymond Boyce, stage designer; Neville Lodge, Wellington cartoonist; Dr C.A. Fleming, FRS, a naturalist; Mr D. Sinclair, a publisher and art editor of Wellington; Mr D. Heath, an industrial design consultant of Auckland and Mr G. Nees, executive officer of the NZ Council of Industrial Design.

MIREK SMISEK

Mirek is now well established and with kiln built is in production at Manakau, north of Wellington.

We anticipate a contribution from Mirek for the next issue of the *Potter*, telling us in more detail of his potting set-up at Manakau.

NO COMMENT

The *POTTER* understands there is no truth in the rumour that Auckland is planning to bring out an Arts Publication called "Dissent"

MAISIE HILL

Maisie Hill, who was tragically lost with so many others in the *Wahine* disaster, belonged to that generation of N.Z. potters who have seen the craft develop from amateur enthusiasm to a rapidly growing professionalism. She was, herself, a potter of some distinction..

In Christchurch in 1956 Jim Nelson and Yvonne Rust opened a small class for pottery instruction in Papanui Road, where the hard work and fund raising efforts of Maisie and others contributed to the eventual opening in Springfield Road of the present Craft Centre. Here Maisie became a very competent earthenware potter.

When Yvonne Rust moved to her own, now legendary studio in Colombo Street, Maisie and her group were initiated into the making of stoneware, working in an atmosphere of dedicated enthusiasm which nursed several of New Zealand's best contemporary potters.

Maisie's final development as a fine and sensitive potter came when she and Wyn Reed, (her sister) shared an oil-fired kiln in the garden of the Reed's Dyers Pass home.

The two Pan Pacific Arts Festivals held in Christchurch in 1965 and 1968, gave potters the unique opportunities of meeting Shoji Hamada, and later, Michael Cardew. All who were involved with organising these historic visits (and that of Kawai earlier) will recall Maisie's quiet efficiency in doing those unspectacular jobs vitally necessary to the smooth running of these important seminars.

Maisie Hill's involvement with pottery and potters in Christchurch is now bound in its cultural history. She will be remembered.

CONFERENCE IN PERU

The World Crafts Council Biennial Conference took place in Lima, Peru at the end of August. It was attended by 800 craftspeople from over 50 countries. A most interesting programme was arranged with lectures by well-known craftsmen from different countries and panel discussions on the dialogue between traditional and contemporary crafts in design, production and marketing.

The total member countries of the World Crafts Council now number 62. Mrs Nan Berkeley, President of the New Zealand chapter of WCC spoke to the meeting about progress in New Zealand and gave details of the large WCC exhibition held last March as part of the Auckland Festival of the Arts. Mrs Berkeley was re-elected as a member of the Directorate and her Australasian zone has now been extended to South-east Asia.

Tentative plans were made for the next Conference in 1970 which will take place probably in either Turkey, Morocco or Tunisia and will include an International Exhibition of Crafts.

There were many famous potters amongst the conferees, including Janet Leach and Helen Pincimbe of the UK; Christian Poulsen, Denmark; Danekl Cobblah, Ghana; Marea Gazzard, Sydney, Professor Karl Martz, Indiana USA; Frans Willenhain, Rochester USA and Nino Caruso of Italy.

The Peruvian Indian craftsmen potters, weavers, candlemakers, silver workers, basket makers and many others, worked in their own demonstration areas producing a wonderful variety of beautifully designed and constructed examples of folk-art; traditional in nature but showing the mark of the individual craftsman. The potters made hand-built pieces, including many churches of typically Peruvian design. These are known as roof-top churches and in many towns are cemented to the roofs, making a most decorative silhouette and acting as a protection for the house and its occupants against evil. The people are deeply religious and the potters express their mystical feelings in sensitive moving individual crucifixes, nativity scenes and other ritual sculptures. Then there are the gay and whimsical containers they make to serve *chicha,* their fermented corn drink, the many strong, sturdy and decorative bulls, the delicate figures of musicians and many other forms of ceramics.

AN INSTANT KILN

A primitive brick kiln was made of very simple construction by the Indian potters and used for earthenware firing during the Conference. A few yards away Frank Colson set up an updraught Catenary kiln, fired by kerosene. It was covered with a layer of Kaowool, a thermal blanket made from China clay and originally invented to place in the 'fire-walls' of space rockets. It was built in two days, then fired to 1300C in about nine hours. If potters would like information about this kiln they should write to The Colson Studio, 1666 Hillview, Sarasota, Florida 33579, USA.

There was only one thickness of fire-brick, then the layer of kaowool and, at the height of the firing, when the whole kiln was a glowing red, the kaowool could be touched by hand. The capacity of this kiln was about 5 cubic feet, with an arched roof.

Some beautiful pottery was on display in the exhibition of conferees' work which was set up at the Conference. Mrs Berkeley took many photos and hopes to be able to circulate the coloured slides to interested groups next year. □

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