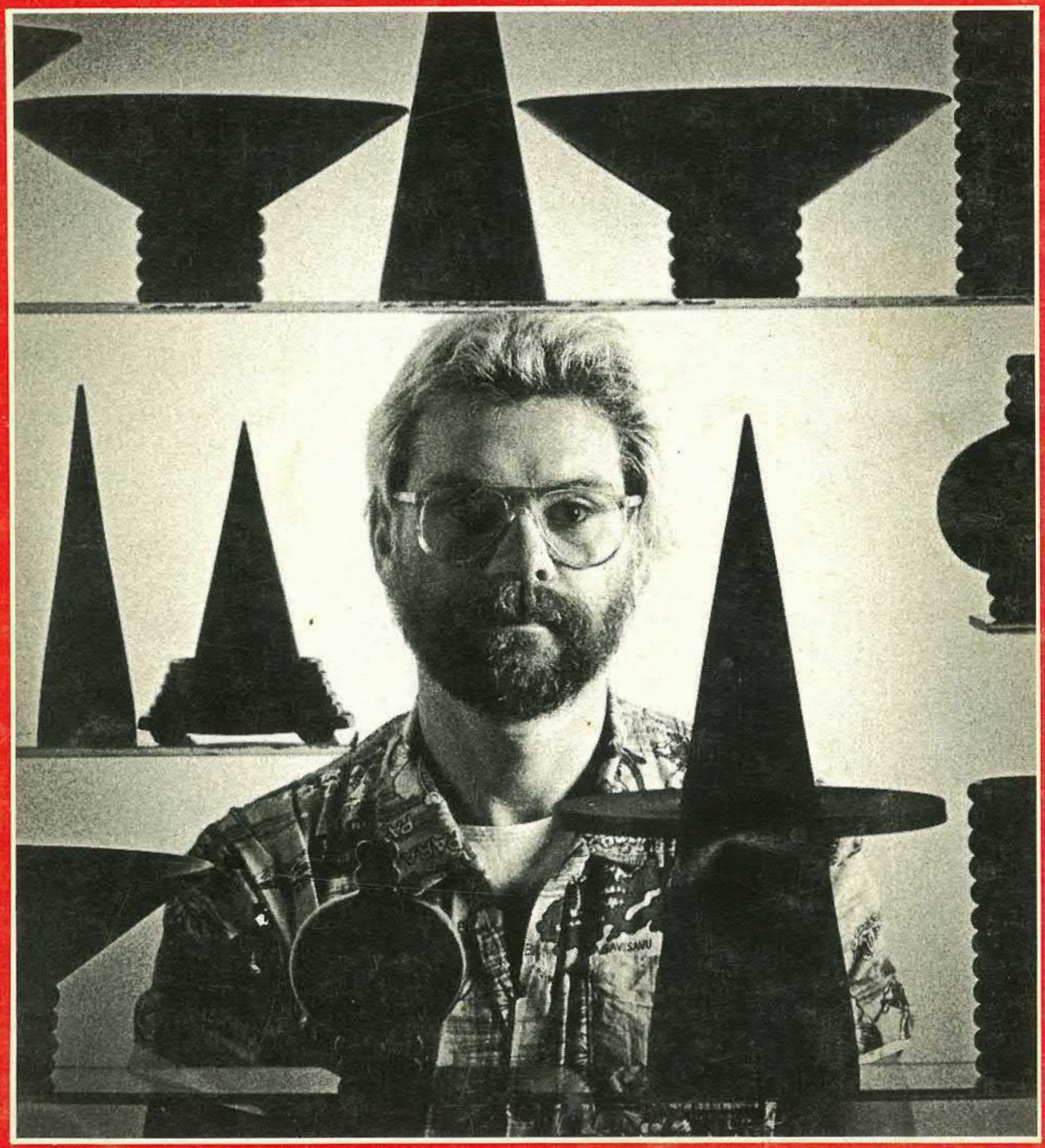
Potter

New Zealand Potter
Vol 23/2 SPRING 1981



JOHN PARKER
Potter

Dear potters,

Ceramics 81 was a milestone for the development of pottery in New Zealand, providing us with a reference point from which we can go forward.

While a great deal of potting will follow tried and true techniques there are many of you developing new thoughts and materials and methods, extending existing techniques, for example producing glaze effects, oil spots, crystals, lustres, Shino and working on kiln and firing advances.

We point out that there is no shortage of material coming forward, but we too must move on. We want to publish the best, to record the inspired achievements, the exciting moments of New Zealand's potters against the background in which they work.

Only first class black and white photographs reproduce well, (for how to photograph your pots see Potter Vol 23/1 page 12).

Articles should be specific, with supporting diagrams or illustration where necessary giving the kinds of details readers want to know. (Payment is made for informative technical articles.) Space allotted is usually determined by the quality of the contribution and the type of information offered. When judging an article's worth we ask: is it interesting: is it helpful: are the ideas expressed clearly: and above all, is it original and creative. You may think you are no writer, but if you understand your subject and state the facts, a good article is there.

So if you are involved in progress let us know. POTTER is available as a medium for sharing your innovations and problems with fellow potters the world over.

Yours sincerely,
Editors

Cover: John Parker of Auckland with some of his pots; born 1947, has his studio at Waiatarua close to Auckland. He has contributed to this issue under what might be headed Twists of History "a quasi historical note". (See centre pages.)
Photograph: Steve Rumsey.

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asst. editor: Audrey Brodie
layout: Nigel Harris
Auckland correspondent: Howard Williams,
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Wood firing with a Bourry Box kiln

It was in 1911 when Emile Bourry in his *Treatise on Ceramic Industries* described his firebox for woodfired kilns that minimised the amount of ash free to circulate around the ware. Bourry wrote:

Wood can be burnt in the midst of the goods when the latter are not injured by contact with ashes which are easily carried about by the draught. This method of heating presents no other difficulty than that resulting from putting of wood into the kiln, an operation which must be frequently repeated, though it causes the entrance of cold air and a serious loss of heat. These defects are specially noticeable when faggots are used, and to remedy them openings for charging should be lengthened outwardly to the shape of tunnels, closed by a sheet-iron plate suspended at the upper part. These charging tunnels hold so much wood that any air drawn in by the draught is warmed while the charging is taking place. This arrangement, which is used especially for faggot fuel, is also applicable to intermittent kilns as well as to continuous kilns. Wood in the form of logs may be introduced into the latter kilns exactly as if it were coal.

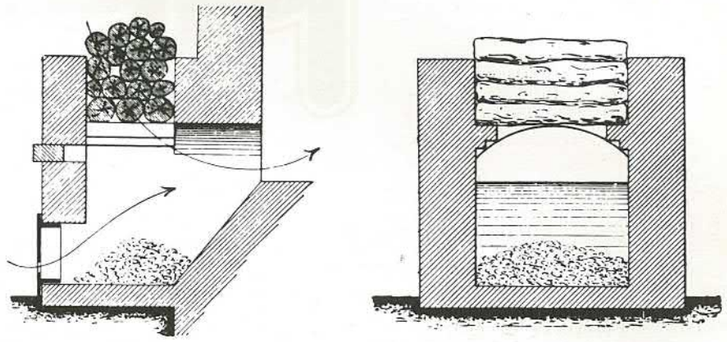


Fig. 132.—Furnace for wood.

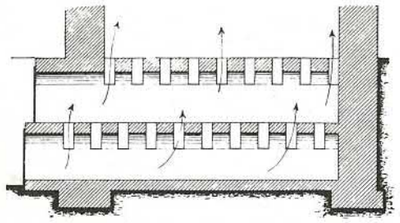


Fig. 131.—Furnace for burning wood.

Blocks of wood may also be burnt in fireplaces with gratings as in Fig. 131. The hearth should be prolonged beyond the front of the kiln, and the wood charged through an upper passage, the dome of which is placed immediately underneath the kiln and carries the goods to be burned. The air enters by a lower passage which forms an ashpit and leads into the upper passage through the openings arranged regularly in the dome of it, but not opposite those of the first one. A part of the fuel falls into this ashpit and is consumed there while heating the air. This arrangement is specially applicable to updraught kilns and can easily be modified when necessary.

For the production of high temperatures, various patterns of fireboxes are used. The type represented in Fig. 132 gives good results provided all the logs used are of the same length. These are piled in the upper opening of the fireplace and rest on two brickwork projections. The combustion takes place by the air passing between the logs, the flames following the direction shown by the arrows. The embers which fall to the bottom of the fireplace help the burning, owing to the air entering through the ashpit door. This type of fireplace is built into the kilns; it gives very long flames and is suitable for all kinds of work. For slow firing, the logs must be replaced by faggots, or the upper opening may be closed with a damper.

Two potters offer their experience woodfiring with a Bourry firebox

Peter Gibbs—Nelson

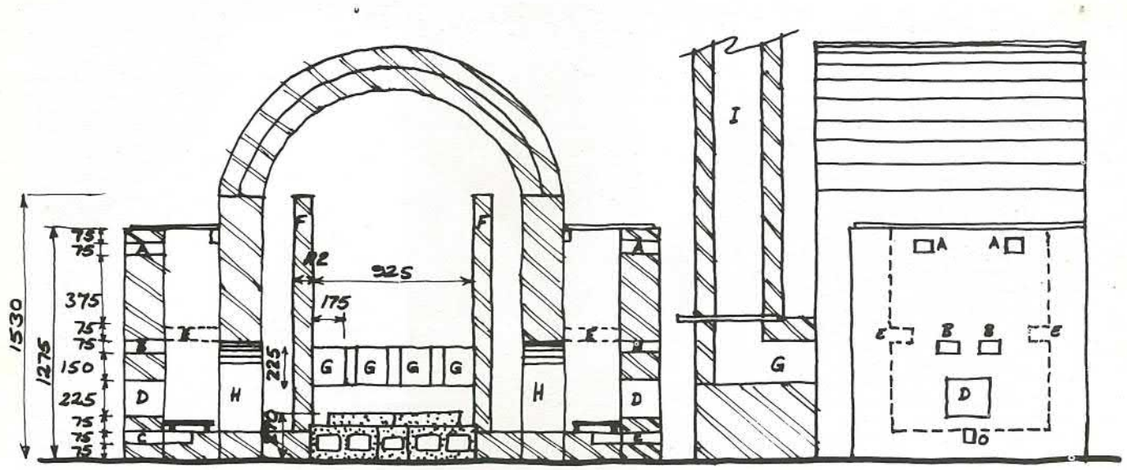
I built my kiln in Spring 1979. My reasons for choosing this type of firebox were, firstly, I wanted to be able to easily fire the kiln alone and secondly, I could handle two fireboxes, giving a more even firing. I used two books when planning: "Layed Back Wood Firing" by Janine King and Stephen Harrison and "Pioneer Pottery" by Michael Cardew. The first gave practical building and firing instructions, written in an enthusiastic way, and Michael Cardew gave in detail all the ratios, dimensions, and theory.

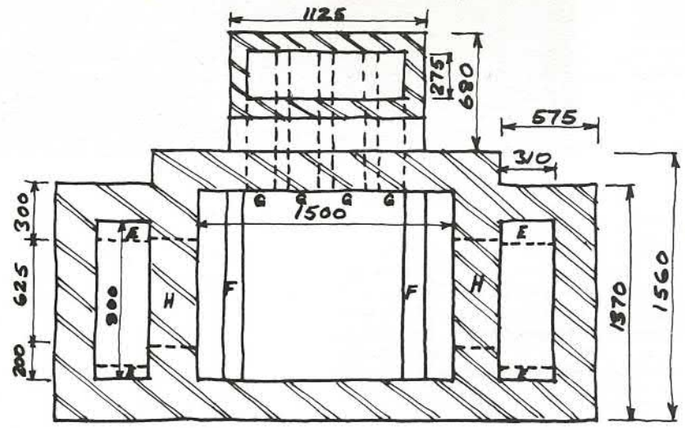
The kiln was built mostly with wedge bricks from the old Onekaka ironworks, and held together with Parapara fireclay. The iron work consists of 75 x 75 angle iron on the four corners of the firing chamber with 50 x 50 angle iron holding the fireboxes. This was bolted together with 50 mm rods. The arch was buttressed with railway iron backed by 50 x 50 angle iron. The firebox lids were made of 5 mm steel backed up with low grade fibre. In theory this was a good idea, but in practice, most of the fibre was knocked off after a few firings. I made the lids in two halves with an overlapping flange, and fixed a pulley in the steel work above, so that one lid could be held open during stoking. The secondary air holes are about twice as big as necessary, but can be used as secondary stoke holes towards the end of the firing. On odd occasions when a large amount of wood drops onto the ember bed and partially blocks the throat arch, this can also be cleared by poking through the secondary air holes. The arch consists of one layer of brick with a layer of fibre, aluminium foil, then 100 mm of sawdust/fireclay mixture on top.

The kiln takes six 16" x 12" shelves on the floor, and is just tall enough for me to stand inside and stack without stooping. The total inside volume is 2.5m³ (88 cu.ft.) and the available stacking space is just over 1.5m³ (55 cu.ft.).

I generally stack bigger pots bottom and top, and fairly tight in the middle.

Before firing I try to be fairly careful to warm up slowly, if possible having a warm-up fire for a few hours the previous evening. This is in one firebox only, right back in the lower stoke hole door. The general firing pattern I follow is fairly well documented in both the books previously mentioned, although I follow a simplified procedure at around 600°-700°C. Instead of changing stoking from the lower door on to the hobs at this point, I load from the top either with short scraps, or with full lengths introduced vertically, so their lower end rests on the embers. This change needs to be done quite cautiously, as the kiln can suddenly take off at this point. When the embers have built up to a point when this method is no longer practical, it is time to change to the hobs.





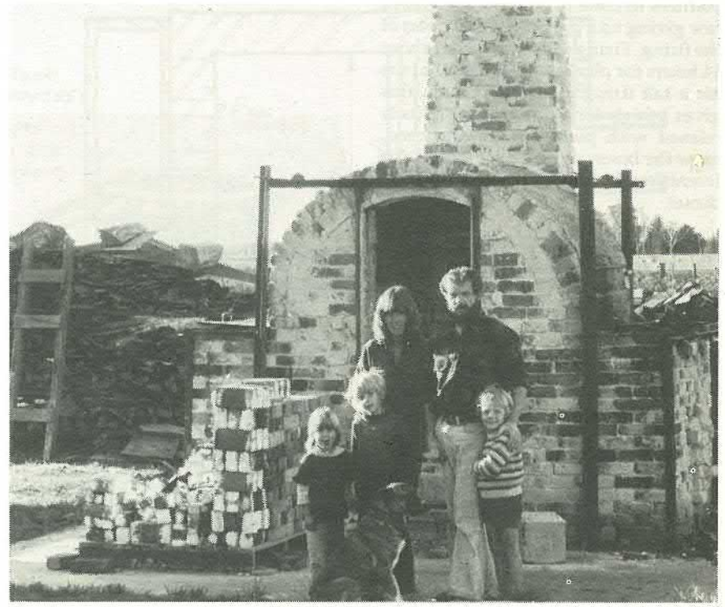
PETER GIBBS
BOURRY BOX TYPE KILN

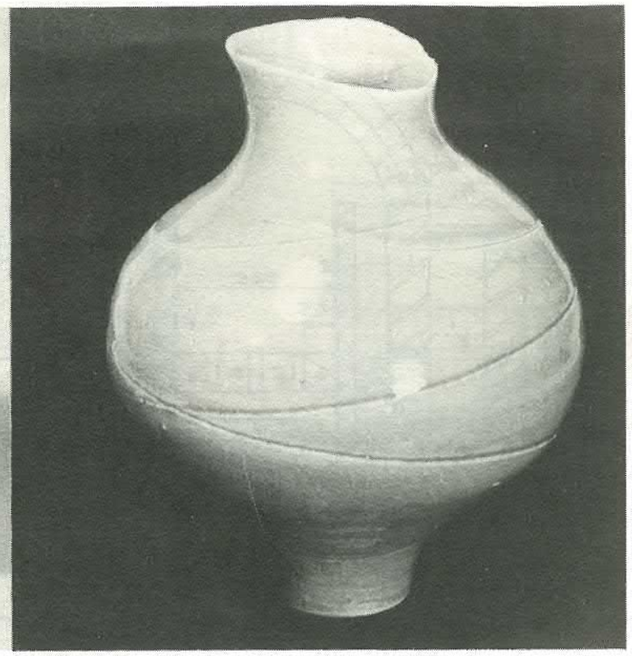
NOTES:

A. Primary Air 75 x 112
B. Secondary Air 75 x 112
C. Mouse Hole 75 x 56
D. Lower Stoke Hole 225 x 225
E. Hobs
F. Bag Walls
G. Flues to Chimney
H. Throat Arch
I. Chimney – Height 5280
Final Top Dimension 275 x 550

Briefly the firing goes as follows from cold:

3–4 hours: Fire in lower stoke hole doorway one side only for first hour or two.
2–3 hours: Fire on floor of firebox.
2–3 hours: Top loading scraps or longer pieces until 800° to 900°C.
8–12 hours: Stoking on hobs. With the exception of the first hour or two, I keep the fireboxes full. This necessitates stoking every 10–15 minutes. During this time the primary air is full open, the secondary air half or less, and the lower stoke door and mouse hole are tightly clammed up. For reduction, I either stoke with thinner wood or close the secondary air a little further. This control is very sensitive. The chimney dampers are not used, although I leave the damper slots open, spilling some air into the base of the chimney. At about cone 8 or 9 the top is about a cone hotter than the bottom. Then I plug up the damper slots and the extra pull gets the





photos: Bob Heatherbell

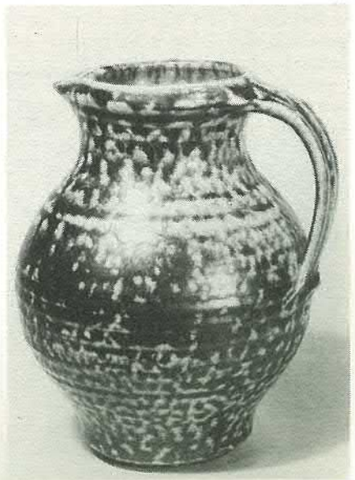
heat down to the bottom of the kiln, so that cone 10 is bending at the top and bottom fairly evenly. I use Orton cones, and start salting when cone 11 is nearly down. Following salting, which takes about 1½ hours, I continue soaking until cone 11 is right down.

The firings are varied, some salt, some normal glaze firings, and some planters to cone 6. All pots are glazed raw giving us a protracted early part of the firing. Firing times vary from about 14 hours for planters to about 20 hours for a salt firing. Starting at 5 am this gives a fairly long day, but it's mostly relaxed with plenty of time to read, mow the lawns or tidy up. Not too different from the leisurely firing days of diesel.

The most important aspect is preparation of the wood. The minimum drying time for stacked pine slabs is 6 months, and this is over the summer. I use 1½ to 2 cords per firing, so this means a considerable amount of stored wood for a 3 to 4 weekly firing cycle. Lately I have started getting the wood pre-cut to length as the amount of time spent cutting and stacking just couldn't be justified economically. Even so, firing costs are about half that of diesel, although I live in an area where pine is plentiful. With the exception of salting, the firing process is virtually smoke free, with good flame flashing of the wares.

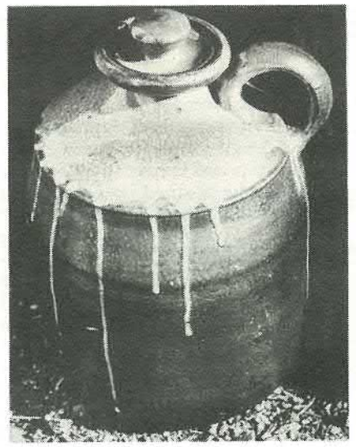
References: Layed Back Wood Firing by Janine King and Stephen Harrison available from The Editor, The Potters Society of Australia, 48 Burton St., Darlinghurst 2010. Price in 1978 was about $2. Pioneer Pottery by Michael Cardew, Longmans.

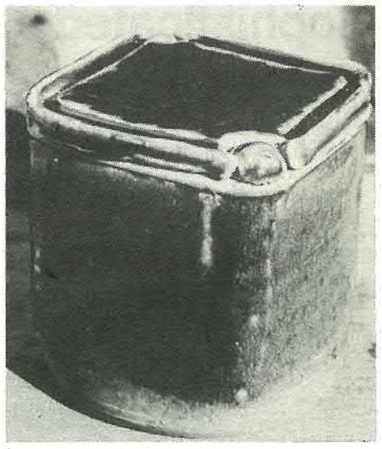
Peter Gibbs
RD1 Brightwater, Nelson.



Glen Beattie— Coromandel

Stoneware jar 26 cms high, porcelain box 14 cms photographed at NZ Craftworks by Richard Hendry





After six years of successful firing with a Brickell Dutch oven firebox, and because he enjoys experimenting, Glen built a Bourry box that is interchangeable with his Dutch oven onto his kiln.

When experimenting with the chequered floor he discovered that this is the crucial element for controlling whether you have an oxidising or reduction firing. Opening up gives oxidation, tightening gives super heavy reduction with long, slow firings—so the floor layout is very important.

"Advantages of a Bourry box to me are: The air control, both secondary and primary is exact hence you can have reduction without back pressure and almost smokeless firing. Stoking is less frequent, there are no grates to repair or clinker to clear."

So the Bourry box is not faster than the Dutch oven, but it is far less demanding to fire.

"I start with a fire in the ash pit—for about three hours until I get colour in the front and bagwall area, then stoking begins through the stokehole but putting the wood end on down into the ashpit, blocking off the front of the ashpit except for a 4 inch gap at the mousehole, and open the two primary air holes at the top of the firebox by taking out the half bricks. After ten minutes, I build wood up on the hobs. From now on the firebox is kept well fuelled—you cannot overstoke as the wood is continuously falling into the ashpit where it again burns with the help of the secondary air blasting through the mousehole.

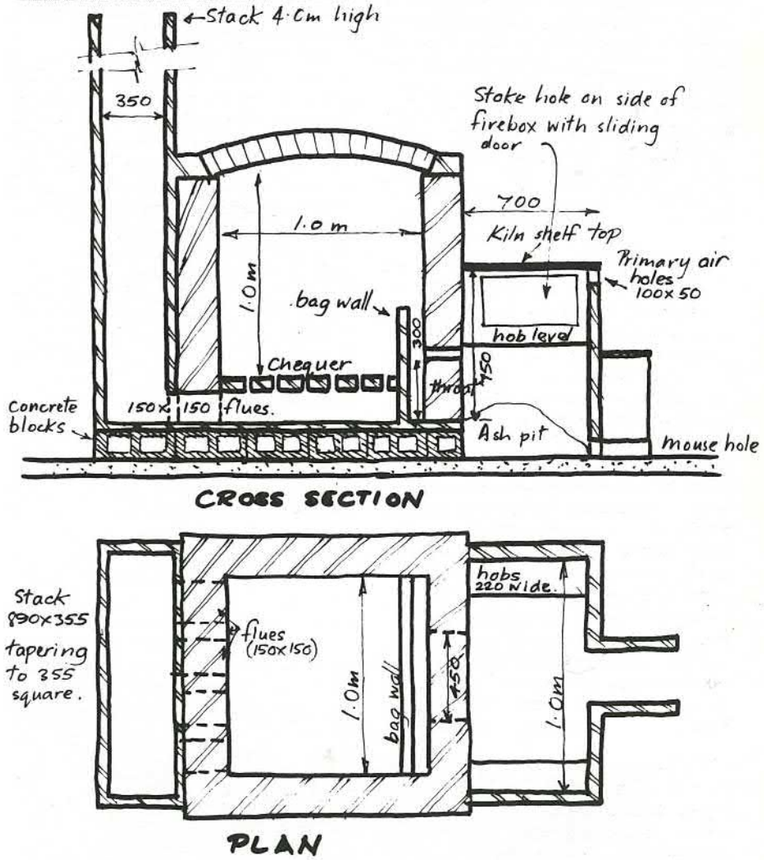
The ash should be kept at two thirds of the height of the pit, partially closing the mousehole. The restriction caused by the higher ash pile will help create turbulence and a reducing atmosphere. Reduction begins at 1000 °C by placing soaps in the two primary air holes reducing their area by half.

The mousehole is cleared every few stokes by drawing back embers. The stoking cycle is about five minutes reaching temperature in 12 to 13 hours.

Stacking fuel for two months if possible is a great help. There is a shortage of dry fuel in Coromandel so I'm sometimes forced to use pretty green fuel. The firings are longer, but the kiln still reaches a good cone 10 top and bottom.

There is more I could say, so if you want to talk about it or see the kiln, get in touch."

Glen Beattie
Albert St.. Coromandel



This firebox allows a balanced control of the kiln atmosphere as well as efficient burning of the fuel through the precise admission of primary and secondary air. Throughout the firing the box remains outwardly cool thus preventing the stoker from getting burned and exhausted. If sufficient wood has been prepared the Bourry box offers the potter a relaxed rhythm of stoking and a real sense of control.

The principles of Bourry box firing can be applied to already built kilns. Its possible to add one or more Bourry boxes to round, sprung arch or catenary arch kilns. A tall chimney is essential and the wood needs a large burning space with generous passages even with a small chambered kiln. Potters who fire with Bourry boxes who have something to add to our knowledge, communicate your thoughts to POTTER.

Sophisticated use of primitive pit firing

by Howard S. Williams

Auckland potter Ray Rogers is well known for his large scale pottery—thrown and finely turned floor pots, blossom jars and platters, mostly in gas fired stoneware, and for his control on a smaller scale, of celadon porcelain. Not being experienced in decorating techniques he has been searching for a long time for some form of surface treatment which would complement his shapes in an organic, more than in an applied graphic way. Ray was excited therefore when he first saw results from a primitive style pit firing.

In the course of his trip overseas in 1980, he was invited to a low-fire "happening"—over 300 potters on a beach near San Jose, California were working with various raku and pit kilns, and some of the results from the latter gave him ideas that seemed to have great potential for his own large scale ceramics. Four days of watching, helping and discussing technicalities had him so excited that the rest of his trip through the States and Europe had an element of frustration—he couldn't wait to get home and dig a pit kiln. On his arrival back in Auckland one of his first moves was to pick up a spade.

The results of Ray's first pit firing were so encouraging that he was offered a 100 pot exhibition at New Vision Gallery in July, and a Q.E. II Arts Council grant to enable him to research and develop his work for this exhibition.

Initial firings had heavy losses through the thermal shock on stoneware clay; raku bodies were not suitable, so by experimenting, a special body was developed using fine grog, sand, and varying additions of high refractory fire-clay. The body retains enough plasticity for the throwing of large forms with smooth surfaces, yet will withstand the rigours of the fire. One of these pots earned for Ray a merit award in the last Fletcher Brownbuilt, "It was worth all the effort and the initial losses to get everything working as I wanted."

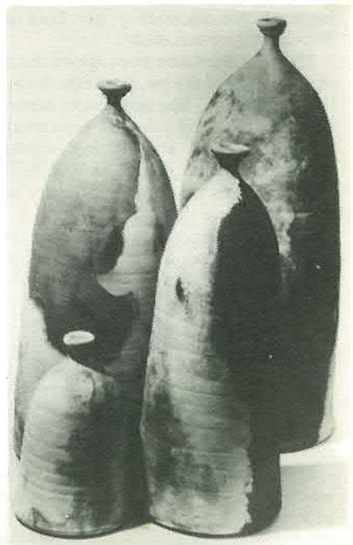
Ray's pit is dug into clay, 5ft deep, 14ft in length, and 3ft across. Some wood fuel is laid to cover the floor area and then the bisqued pots are placed carefully on and in, with consideration for special localised effects—some are placed upside-down, some stacked inside others, some partially buried in sawdust or leaves. Large platters are placed on edge in order to capture the drama of the flame tracks; platters upside-down are very dull, and right way up only minimally better. Of these edge-stacked platters only 25% survive the fire, but those that do are really magnificent in their patterns of reduction and smoking.

Salt, oxides and other materials can be placed, sprinkled or sprayed on the pot surfaces, or placed near a pot to produce effects due to local atmosphere changes. Fuel is then stacked around and on top to a height of 3 feet—sawdust, demolition timber, brushwood, split firewood, bark—every type gives different effects, the ability to control, being solely in repeated experimentation, keeping of records and learning by experience. The pit is then covered with corrugated iron sheets which can be adjusted during firing to produce differing rates of fuel burning, and again altered effects on the pots. The "stage" is now set, and the fire lit. Post fire alterations are not done as in raku, here everything is dependent upon the stacking and firing procedures. After the fuel is nearly burnt down, the fire is restoked along the length of the pit perhaps 3 times during the course of the 5 to 6 hour firing. Foil covered potatoes, sweetcorn etc baked on the corrugated iron and liquid refreshments are necessary to restoke the stokers, until they judge that the firing is complete, then the pit is left partially covered, to cool down over the following 30 odd hours.

Flame effects and oxide colourings come mainly during the cooling period; the major part of the firing is to obtain the necessary 850 °-950 °C; again a matter of experience as cones or pyrometer are not used. At this temperature the pots remain porous so their function is to be sculptural/decorative. To fire them to a higher temperature to make the body less porous and physically stronger, means that they will not absorb the firing effects—the whole point of their visual and aesthetic appeal is negated.

Pots when removed from the cooled pit are washed to remove ash, and to make sure that whatever is on the surface is permanent—nothing should be able to run off on the hand.

Ray's large, smooth surfaced pots are ideal for this type of pit firing. They are burned with form-following flame paths; black, grey to natural whites, but including the most subtle oranges, reds, yellows, blues and greens, sometimes powder-soft, sometimes full of dramatic impact. The pit allows for many pots to be fired at once, unlike the raku kiln, and it is ideal for group activity. Imagine hundreds of people on a beach in summer firing their pots together in a sand pit kiln 100ft long! Ray's pit-fired pots have already been bought by several of the country's major galleries, he has been asked for exhibitions by the Dowse and Sargeant galleries, and is booked by local groups for weekend schools in order to share his experience and knowledge with others.



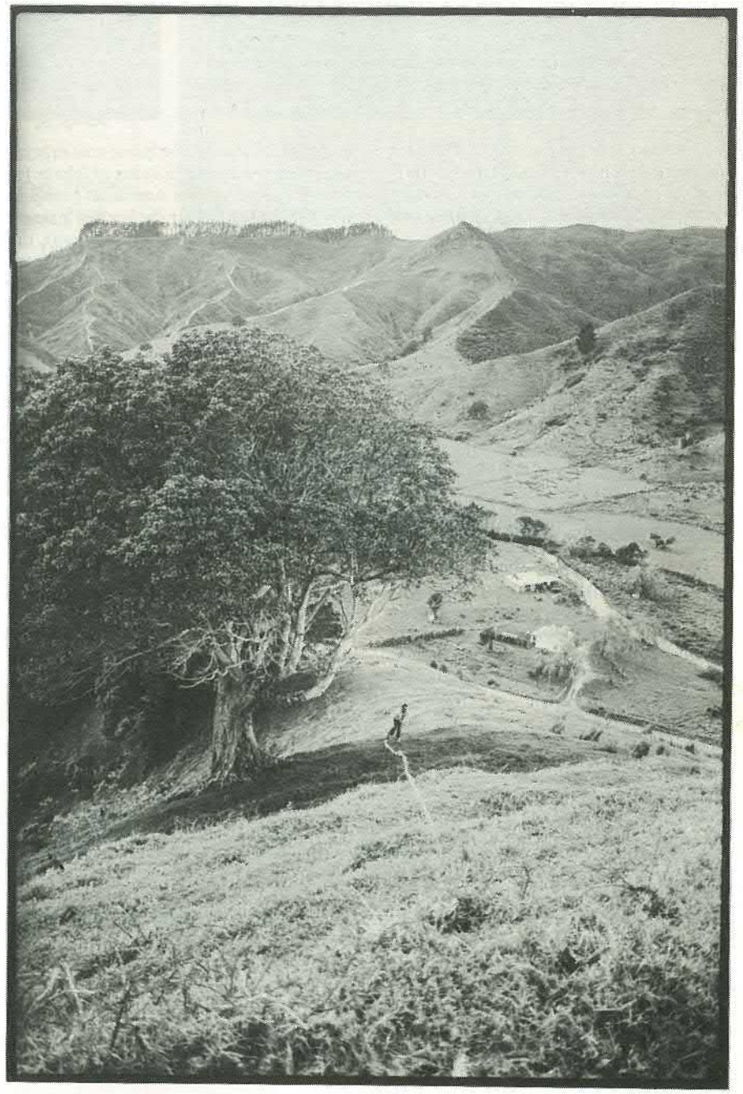
photos: Howard Williams

Some Coromandel potters

When Barry Brickell took over his acres at Driving Creek making Driving Creek Potteries II a communal workshop, Paul Tobin and Paul Lorrimer were beginner potters there. They were not apprenticed, but worked independently, firing their own kilns. At the same time they absorbed influences in the heady days of the first wood firings in the Dutch oven firebox of the Driving Creek kiln.

My Coromandel—a pottery anti-romance thriller

Catherine Delahunty



Back to nature or apocalypse now? We were floating half a mile off the Coromandel Peninsula while clouds of orange burn-off smoke, fixing acres of 245T, rolled into the sunset. The Clash on the tape deck were growling "Its up to you not to heed the call up." Another moment to realise the category is not "the country" and the occupation "pottery", just life on earth, surreal, poisonous and beautiful.

Taking it back seven years I was a pioneer of the middle class rural "alternative"; he was a surfer who had found Brickell. We met while "Planet Waves" wailed over the first wood firings at Driving Creek. Then Paul Lorrimer went to Japan and Paul Tobin came to live with me at Colville in a series of tents/hutches/nikau palm fronds on communal land trying to decide where to build a house and a pottery. It was boom time for Coromandel communal land buying. I was vocally idealistic about living in the country, Paul was just making pots where he could.

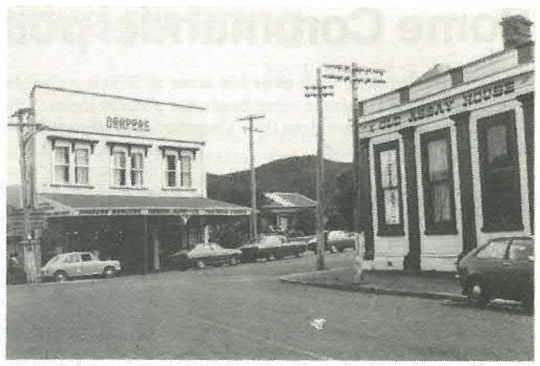
We stayed with Warren Tippett and then bought the three acres next door where we still live, amid floods, slips, in a hundred year old house notable for having been totally neglected. A great deal occurs in the staying in one place, equal to having been around the world; but we are fed by glimpses of New York, English New Wave music, Paul Lorrimer's letters from Bizen and South American revolutions.

I really used to believe that living in the country had some innate superiority. Seems a peculiarly narrow view to me now. Looking back I can see how the subsistence event sustained me, so long as it was enough to chop wood, plant kumeras, go to sleep with the dark. Such whole attention as a pottery requires, as children require, has brought home to us the benefits of electricity–but that other time, like a dream, is a reminder of a quality! Still one's origins remain, mine political and literary, his gifts for construction. Also wanting to be surrounded by the music we are growing up with.

Lately I have to see Coromandel and our life in another way. My cynicism towards romanticising the "rural craft life" has been placed on another level. Idealism erodes, but the multi-national mining companies have reaffirmed what is valuable. Generalising about the way people live is perilous. Change is the real continuum–but the co-operative greed, shortsightedness and false values that we must oppose to survive, has come to our doorstep helping us to know what our privileges are. It is a classic illustration of how the mentality of fear and comfort manipulates the population to ignore the obvious.

The Peninsula is a theatre landscape of light and water notwithstanding the floods, burnoffs, poisonous sprays. A family such as ours can live on its own piece of land, can be supported by something worthwhile, can be independent to a point and can certainly resist the idea of "development" and "think big".

We may no longer live on silver beet and we love having television at the end of the bed, but the lesson is that poverty and candlelight are nothing to be feared, our



good fortune is to choose it, or not. And if the price becomes Amax, Amoco, Muldoon, Ben Couch, Aramoana, Bastion Point, the Springboks, there is only one side of the line.

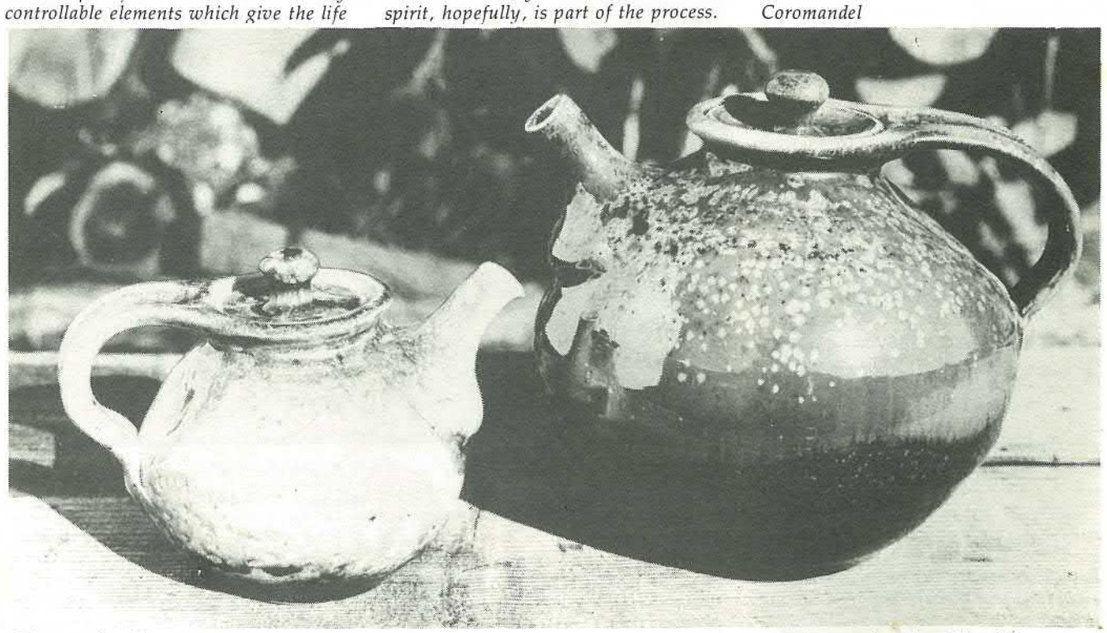
All this is remote from how many hours it takes to reach Cone 10, but what do you want to know? If you want an idea of what Paul's work is like it is simple enough to look at what it is like because that is what he is and the standard by which he judges it is simple for him, in that either he finds it lively or he does not. The political dimension is that a person who is able to make and sustain that kind of effort will not make speeches or write pamphlets (as I do) but has the strength of being unavailable to mass hysteria.

The way we have lived has taught me a great deal I would never have known alone, without experiencing wood firing as a metaphor for the unknown and barely controllable elements which give the life its finish. A similar discipline was experience through the 15½ hours of labour for Esther to emerge, her umbilicus firmly in her fist. I used to fear (before the present love, before the present work began), the word compromise. Although this week images and longing for Africa lie in the mind's eye I am excited that we are going to Opotiki for the first time next week. We are already compromised by being housed and well fed let alone the pleasure of sailing the clear, green Hauraki Gulf–God save it from the multi-nationals.

It is wonderful though that there are no boundaries of self once you realise you can live anywhere, be anything, fire an electric kiln once a day and change your hair colour as often. Pottery is a hard way to go in that there is so much responsibility for yourself, (the evidence is in your friends' kitchens) it is always there, but it is a way of being centred that I envy. It tends to make you think because the spirit, hopefully, is part of the process.

Just the same I have no feeling for it myself, clay has always sat in my hands like lead. My dentist asked, "Are you the power behind the potter?" I choked on the nitrous oxide mask. I do not talk about pottery with women. I borrow his clothes. The shed is Paul's world where I visit him. Graeme Fraser who pots in the same shed is my good companion to make up songs with and sing together in the band. Sometimes the song is "Sometimes it feels like we've been here too long–making the same mistakes" and sometimes the song is "Little by Little" by UB40 and at other times (a perfect firing, a sail to the island, new shoots in the bamboo hedge) if I was Aretha Franklin and could, I would sing Amazing Grace.

Paul Tobin and Catherine Delahunty
Colville
Coromandel



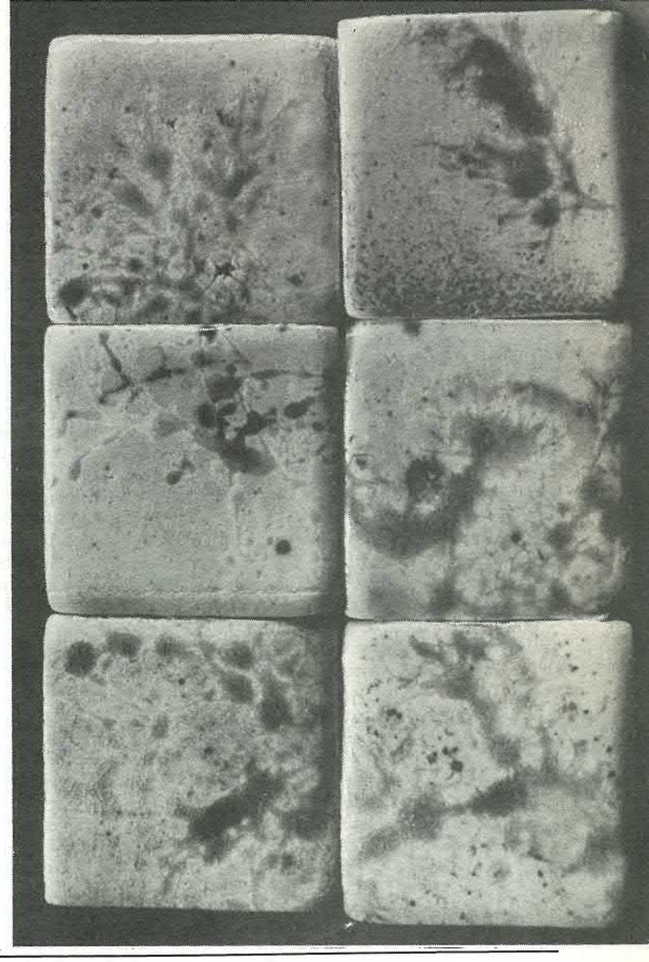
Teapots by Paul Tobin photographed by Richard Hendry at NZ Craftworks Gallery, Te Horo. Paul Tobin's tiles over the page

Tiles: white body 10% iron grog to stop warping of the dense body. Wet seaweed strewn over the tiles will steam patterns into the raw surface during pre-heating of the kiln. The relief traps the salt and ash from the seaweed which is overglazed with pine fly-ash. Depending on the depth of the relief, the colours range from light blue chün type celadons to dark green in deep crevices. Other areas are prone to wild flashes of orange and pink. The hint of salt turns grog spots from yellow to iron red.

The experiment illustrates the possibilities of using raw local elements in natural fusion as opposed to the safety of calculated formulae

The body:

45 ultrafine Kaolin
25 potash feldspar
10 Ball clay
10 Silica
10 dust free grog



BOOK REVIEW
Craft New Zealand
Doreen Blumhardt—Brian Brake
Reed $60

This book is a splendid visual example of how far we have come in the crafts. Over 200 coloured photographs bring to life the craft objects of 133 workers in clay, fibres, jade, bone, stone, glass, wood, enamel and plastics. Brian Brake's empathy with his subjects is consistently sensitive and shows most strikingly in the photographs of carved bone and jade which have attained a lyrical quality. Fifty full page photographs illustrate the work of our potters. The selection is open to question—not all the pots shown here are representative of our best and there are some notable omissions like the work of Chester Nealie. They are a personal choice and if Doreen Blumhardt were selecting today and not in 1979 undoubtedly she herself would make some changes. Having the captions grouped in sections makes for some irritating thumbing back for reference, but this is a concession to the layout concept giving precedence to the illustrations. To this end Doreen Blumhardt's informative introduction and linking text are commendably succinct. A splendid book.

Margaret Harris

Crafts as a livelihood

Just about everything you need to know is covered in this portfolio of booklets. How to run a co-operative crafts shop, Managing the Money, Getting out of a Mess, are some of the titles.

Available at $1 for the portfolio from
Crafts Council of NZ
PO Box 11-233
Wellington

Travelling bowls

Eight bowls were selected from the Crafts Council's Bowl exhibition for inclusion in an international touring exhibition. Six of them were ceramic, five were "regular" bowls. Rick Rudd had the distinction of winning a $500 award donated by Winstones for his Raku creation, an imaginative extension of the bowl idea.

Guide to Nelson potteries

Thirty-six potteries are listed in a local directory put out by the Nelson Potters Association. The guide names the potters, describes what they make and provides information on where and how they sell. A map shows where to find them—this will be more detailed in the next printing. The pamphlet is distributed to all motel and hotels as well as the usual PR outlets. At holiday time such a guide to Hawkes Bay potteries or Coromandel potteries would be useful to have in the glove box of the car.

PUBLICATIONS

Pottery in Australia, 48 Burton Street, Darlinghurst, NSW, 2010, Australia. $A9. Volume 20/1 has good articles on lustre glazing and salt glazing using sump oil as fuel.

Ceramic Review, 17a Newburgh Street, London W1. £7.70 six issues. Vol. 69, oil spot glaze article.

Studio Potter, Box 172 Warner, New Hampshire 03278, subscription two issues $8.50, in US funds.

Ceramics Monthly, Box 12448 Colombus, Ohio 43212, USA. $12 ten issues.

Our pots in Italy

New Zealand is well represented in this years international exhibition at Faenza. Leo King has two pieces accepted, Brian Gartside four, Debbie Pointon four and Ric Rudd five. NZ Society of Potters assisted by QE2 enabled a collective entry to be made from New Zealand.

Warwick Lidgard, fulltime potter for ten years, foundation member of Albany Village Potters Co-operative. Now a potter and farmer at Rings Beach on the Pacific side of Coromandel Peninsula, where he has built a new workshop and showroom. As well as livestock he is growing kiwi fruit. As if that's not enough he is currently science teacher at Whitianga High School.

A spectators view

Warwick Lidgard

The progression of ideas and inventiveness of our potters amazes me. I feel as though I am but another spectator as a great procession of potters with new ideas and clever techniques moves along.

This year I played in a game of country cricket. As I swiped at my first ball the bat left my hands and went flying out to square leg. The second ball I managed to hit for four and the third saw me clean bowled. I'm swiping at a few balls now, so I hope a few connect.

When I am asked for my experiences with Shino type glazes my reaction is I should be a spectator as I tend to get excited about things which probably seem like trivia to others.

I remember achieving my first Shino glaze test after many previous failures and showing my diminutive pinch pot with its pinholed, crawled, crazed white and orange glaze. I found it hard to find anyone to share my enthusiasm. Since then "everyone" has "discovered" Shino, and it has become even more ho hum! Or has it?

The pearly Shinos of our wood firers, salt glazers, the striking crazing emphasised by those applying the glaze thickly and the manganese/iron spherulites produced in over-glazing with other glazes are innovations giving new vitality to an already complete glaze.

It is the detail in variations over small areas of pot surface which provide the added interest as a decorative glaze. Some of the glaze details consciously sought in glaze application are:

(a) Craze pattern—a result of poor glaze fit—accentuated when the glaze is thickly applied and filled with a stain filler such as carbon or tannin.

(b) Colour variation; orange when thin, white when thick, with definite orange response to underglaze iron (ochre) like the "red volcanic earth showing through melting snow."

(c) Pinholing and crawling induced by glazing over heavily grogged bodies, roughened surfaces from combing or incising, tooled ridges and hollows.

(d) Gradation from dry glaze to sheen by altering the Kaolin content of the glaze. The drier glazes offer more of the classic attributes described above. These have more Kaolin in them.

(e) Combination glazes. Some Shinos can be incompatible with some others such as iron reds, producing bubbles or blisters. Like other deficiencies this may be turned to advantage producing "leopard skin" effects if fired long enough. Unwashed ash glazes tend to flux the Shino slightly and provide green areas which contrast nicely with orange and white. Some care needs to be taken as sometimes unpleasant pale puce colours result if the Shino is too thick.

(f) Variation in thickness of the glaze to emphasise combed patterns can be achieved by glazing then wiping back, leaving glaze in the hollows and then reglazing with a fairly thin coat. This produces white in the hollows and orange on the ridges.

Other largely random patterns result from dribbles if glaze is poured rather than applied by dipping. Thickness variations cause colour variations and crazing variations, emphasising the dribble pattern.

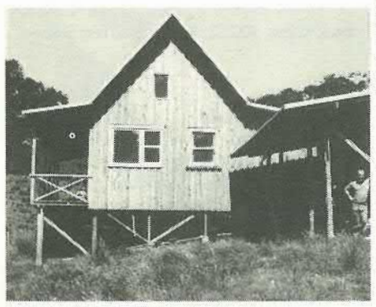
(g) Variations are also obtained by using two or more Shino glazes. I use two, one drier and high firing, 70% Nepheline Syenite, 30% Kaolin (1300 °C) and the other softer and more orange, 65% Nepheline Syenite 25% Kaolin 5% Yellow ochre (1280 °C). Used on the same pot one glaze complements the other. Bowls dipped in the thick white glaze, centre waxed then rim washed and reglazed in the orange glaze, results in an emphasis to both rim and bowl centre while not detracting from the whole.

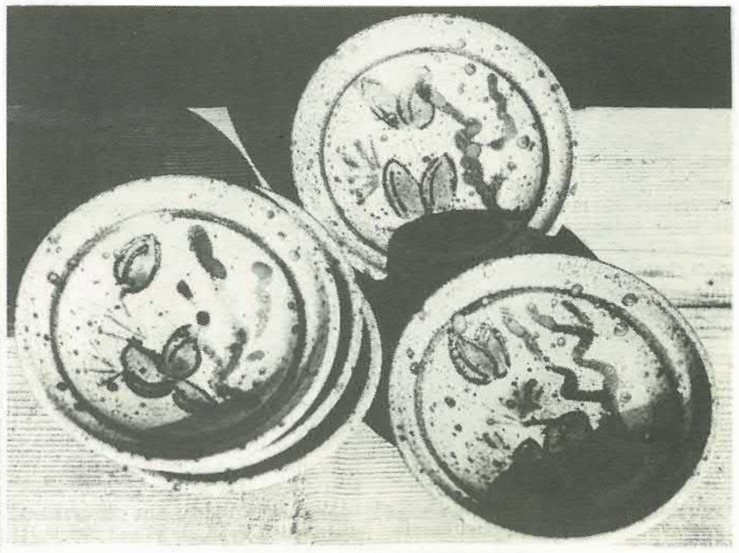
Strong flame flashing produces dry pink Shinos, much appreciated by the Japanese tea ceremony masters.

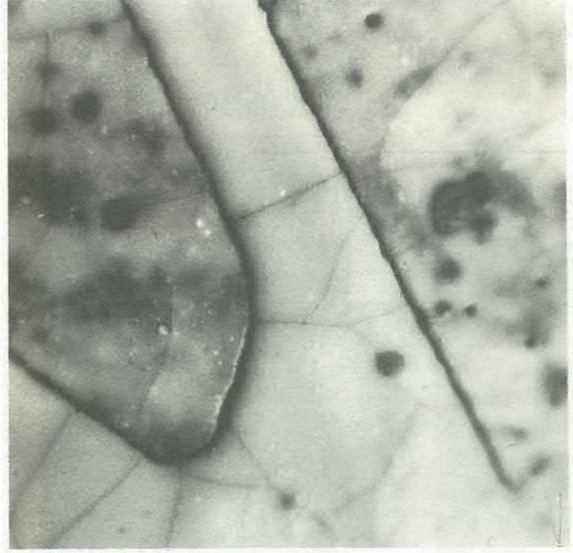
All these effects on pots glazed in Shino produce detailed areas worthy of contemplation. They provide added interest at close quarters to a pot which can also be an integrated and complete form at a distance. The details still excite me and once again I become a spectator each time I open a kiln.

Warwick Lidgard
Rings Beach
RD2 Whitianga

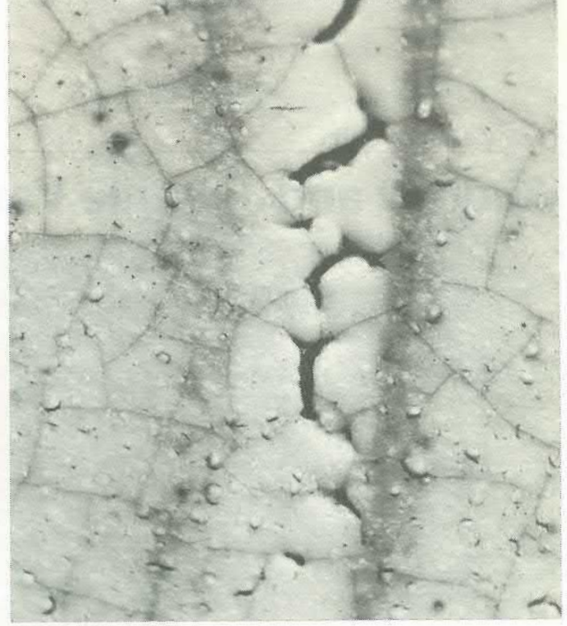
Right: stoneware bowls decorated with a pohutakawa motif, photographed at NZ Craftworks by Richard Hendry.







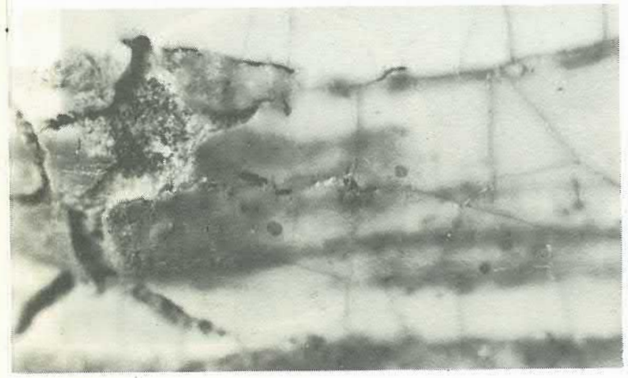
dribbles



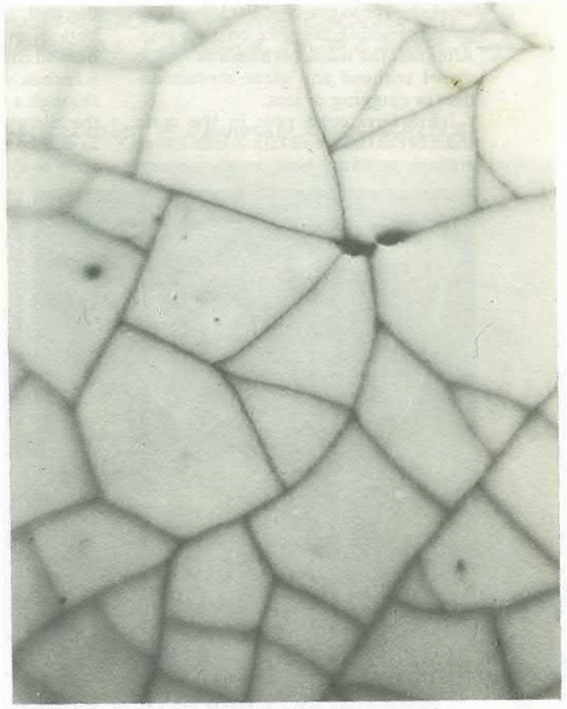
pinholing & crawling

combed patterns

colour variation



grogged clay "eruptions"



crazed patterns

Andrew and Jeannie Van der Putten

In Coromandel there is a shortage of plumbers and an abundance of full-time potters. Among this happy majority are Andrew and Jeannie van der Putten and here, eschewing philosophy, they describe their work methods.

Our average work cycle takes two months with Jeannie working on press moulded and slab pots, me on the wheel making domestic ware. Our stoneware clay and porcelain are prepared at home by mixing the dry ingredients on a concrete floor and adding water. I make up a sloppy mix of each and leave it to sour for as long as possible. However, often I'm using it within a week which means drying the clay on plaster bats to bring it to throwing consistency.

STONEWARE	
Kopuku fireclay	90
Hyde ball clay	40
NZ ultrafine china clay	10
NZ Feldspar	10
Silica sand	10
PORCELAIN	
Australian Ballclay	50
Australian Feldspar	50
Ultrafine China clay	80
Silica	15

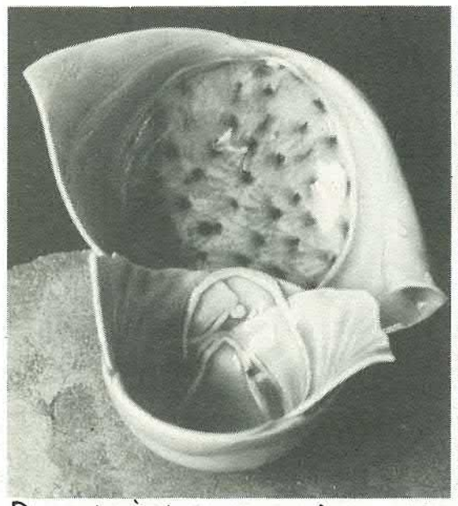
After three or four weeks of throwing, slabbing, press moulding,the workshop is full and pots are ready for firing. Jeannie's pots are fired in her own kiln, an 18 cubic ft vertical jet-burner, brick, kiln fuelled by diesel and waste oil 50/50. I have found it works better to pre-heat the kiln a little by dripfeeding the mix on to a pan. After that the waste oil burns as well as diesel without any glaze contamination or clogging of jets.

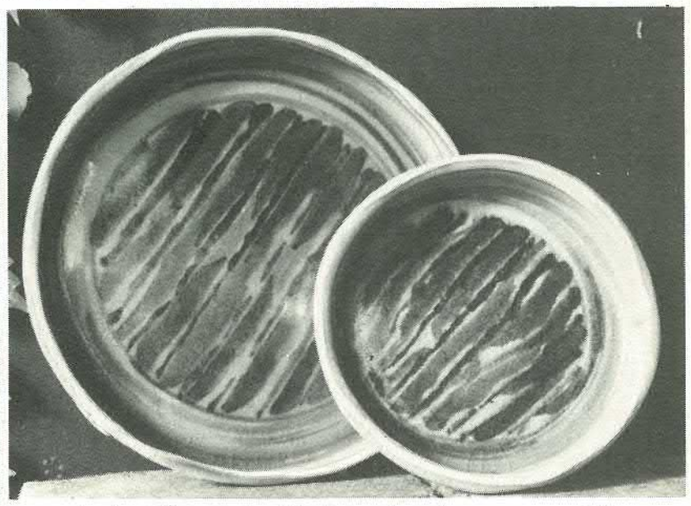
I fire terra cotta pots in the main chamber of the wood kiln which leaves enough residual heat in the second chamber to produce good clean bisque. The bisque pots are then glazed in the usual manner, stacked in the glost chamber and fired to Cone 10, but this time the second chamber acts as a sidestoked salt kiln. This adaptation is recent and I am delighted with the results. The original bisque chamber had to be changed from updraught to downdraught by the addition of a bagwall and the opening up of the bottom of the bisque into the stack. Behind the bagwall is the firebox, only 6 inches wide. The wood is inserted through a 6" x 6" hole from one side of the kiln and falls in to three hobs acting as fire bars. Side stoking is started as soon as the first chamber is up to heat, by which time the temperature behind the bagwall in the salt chamber is 1150-1200 °C. It takes two and a half effortless hours to raise the temperature to Cone 10 and complete the salting.

The salt is introduced through the side stoking hole.

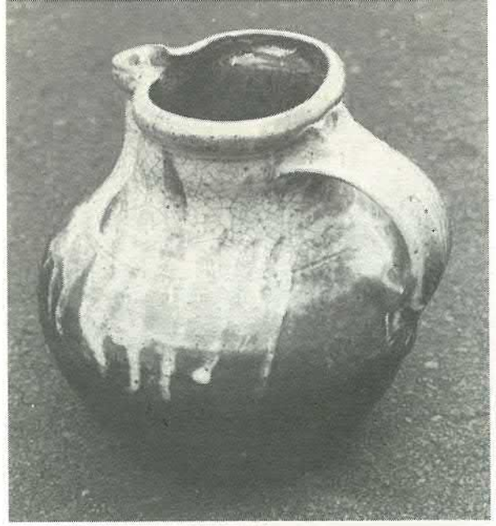
After the firing comes the tedious part of the cycle. It takes a week unstacking, grinding, invoicing and packing by which time we have lost the ability to judge the merit of the work from over exposure, over handling and workshop dust.

Thankfully pots look better as soon as they leave the premises and find themselves a fresh start.

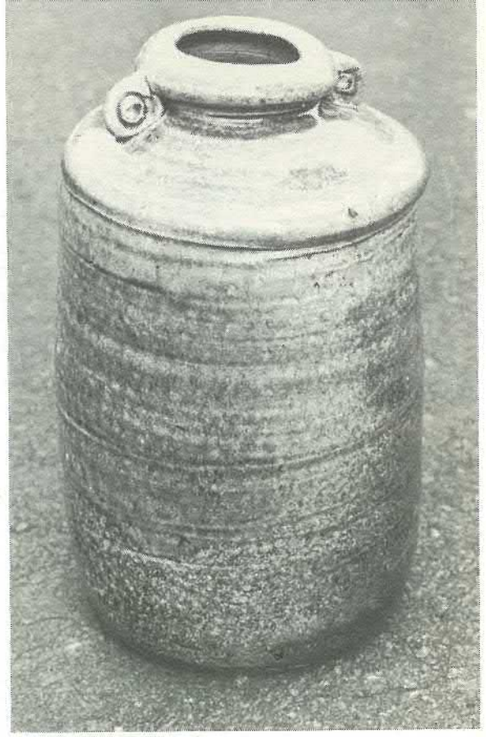




Porcelain by Jeannie, left: porcelain winged dishes, the larger with a cobalt manganese decoration applied by brush over reduced celadon, the smaller with applique decoration. Right: porcelain poress moulded plates with iron/rutile and cobalt (manganese brushed onto the bisque.



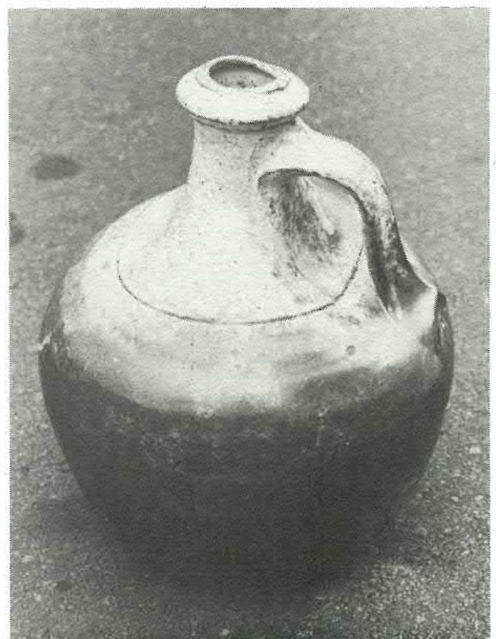
Shino jug. I enjoy making jugs, putting a lip on a pot enlivens an otherwise ordinary shape



Pots by Andrew. Above: jar fired in the usual way in the wood kiln & glazed in Shino. During the firing a shelf collapsed & the pot became stuck to others. After grinding off the chunks I refired in the salt kiln which has proved a successful way of recovering some pots. The jar below left was glazed inside when leatherhard then sprayed outside with an all purpose celadon, fired in the second chamber of the wood kiln side stoked to cone 10 & salted. ¼% cobalt carbonate was added for a blue effect. (cobalt carbonate added to the celadon.) The same procedure was followed for the bottle right.

Soft red porcelain bowl with applied rim. I like to throw porcelain soft to counter-act the hard-edge nature of the clay. Copper barium glaze

photos by Jeff Scholes & Veronica Corneille

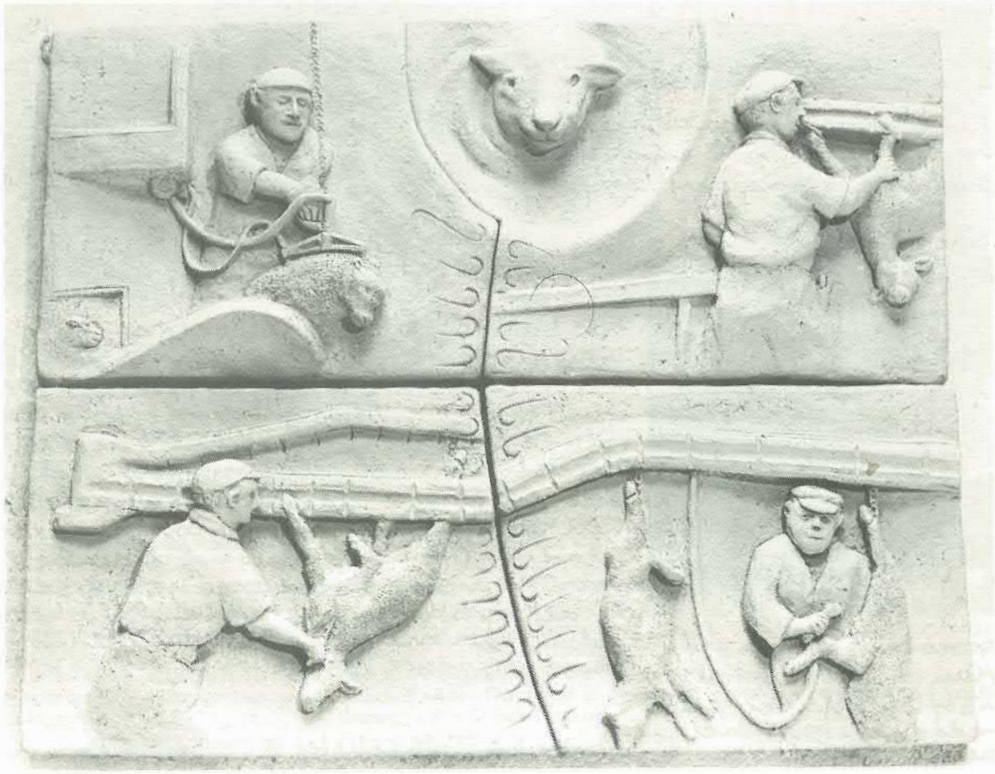


Barry Brickell

Barry Brickell was commissioned by Waitaki NZ Refrigerating Ltd to design and make a mural to mark the company's 100th year of involvement in livestock processing and meat exporting. The mural is in the foyer of the company's new building in Kilmore Street where it can be viewed.

"My personal feelings about labour, skill and work have coloured my whole attitude towards the mural. Irrespective of the nature of the work being carried out, any human being working diligently and with skill exhibits a dignity of form and movement of everlasting value from which artists of all ages have drawn inspiration."

Below: terra cotta panel showing mutton chain and tiles from the executive series and the ancillary series.



Doo reaches end of line

I have To make a clear statement. For the past several years, many people have worked here learning the craft (and occasionally art) of pottery, as well as making pottery for their living. This has been a rewarding experience. Every January, I have Thrown open my paddocks To potters and their families and friends and invited them To share in the Doo. Well, all good things must come To an end. It has all demanded much physical, nervous and psychological energy. My more philanthropic zest has become eroded with preoccupation with some major projects as my life on earth slips and slides by. Not why much has been achieved as yet: so some is the surer. Teacher, personality and organiser, as one Tries To sharpen life's Tools. Essential work demands all day and every day in so much as human and social responsibilities will allow.

The pottery scene has changed so much in the past few years that my former communal workshop idea is no longer justified. As for the Annual Doo, I believe that its vitality and purpose would be enhanced by a regular change of venue. There are now plenty of potters who own beautiful land and have the right To fine hosthood.

Pottery is hardly any longer my main activity although I will always enjoy potting from an amateur point of view. There is always great pleasure in making fine things for friends, compared with the treadmill churnout of anxious merchandise. I wish To thank all those folk who have helped make this place vital over the years, and now look foreword to a more reclusive and perhaps mellow life.

URBAN CO-OPERATIVE

Peter Lange, Lex Dawson and Nicky Jolly have established The Potter's Arms at 223 Dominion Road, Mt Eden, Auckland.

Peter

My family and I came to Auckland in early 1979 looking for a completely new inner city environment after five years living in an isolated country area. My idea was to create an eye catching shop-window potters wheel where there would be queues of people waiting to help me unpack the kiln and forcing lots of money into my grubby little hands—a "clay in the back door, money in the front door" arrangement.

The reality was not so straightforward. I found a good shop with reasonable rent and facilities, but we were still faced with costly setting up expense, and hooked a 35 cubic foot updraught fibre kiln into the city gas mains and started potting back from the window, just in front of the downstairs living room. With wife, kids and customers and social callers whirling around me my brain went fuzzy and we had to head back to the country for a couple of days at a time for a draught of clean air until finally we weaned ourselves from mother nature.

This description of the way we set up hardly expresses the hassles and stress we actually encountered, but the point is that we finally made it to the stage where we did live and work and sell in the same building. We established a small but steady business, largely unnoticed and unpromoted because that was the way we wanted it.

Late last year we bought a house 400 yards away and suddenly we had a surplus of space, all costing money but all useful. We'd had Nicky Jolly a young part-time worker last year—she became fulltime and together with Lex Dawson whom we lured into the city with tales of non-stop parties and balmy days at the cricket we formed a three potter co-operative "The Potter's Arms" working and retailing in the now vacant upstairs and extra room downstairs. We have two studios and a drying room upstairs, studio, workers cafeteria and shop downstairs and glazing and firing out the back.

We each work independently in separate studios and generally we fire separately. Basically we are three domestic ware potters, Lex and myself fairly well established and Nicky just starting.

I have an interest in on-glaze lustre on porcelain which I enjoy for the extra colour and extravagance. It is fairly expensive to produce and to buy, but it seems popular and strikes a response among those who are not drawn to traditional stoneware.

We run our business on an entirely equal basis—time, money and work that is invested comes one third from each. We get paid for whatever of our own pottery sells and this varies for the three of us from week to week, but within a year I would estimate the returns will be pretty evenly distributed.

It costs over $100 a week to run the shop—rent, power, phone—and this does not include potting expenses which are the individual's responsibility. To help cover some of this amount we have started to retail other potters work.

Our policy is to avoid buying domestic ware or small handbuilt work because we produce plenty of this ourselves. Instead we are concentrating on promoting more experimental and controversial work, the sort that many shops hesitate about handling. We have a happy arrangement with Bronwynne Cornish, Peter Hawkesby and Denis O'Connor who provide extremely stimulating displays. As well we have Scott Hockenhull's fantasy pieces, Diana Wyler's porcelain and blown glass from Rob Hooper.

It is perhaps not as relaxed a way of working as that followed by the traditional country potter, but its extremely stimulating, a better deal financially and its part of a significant trend back to the city and in some cases back to the street front.

The new-fangled gas/fibre kilns have been a major stimulus to the back to town movement—reduction firers can now come out of the closet and talk to their neighbours again.

Lex

As an inhabitant of the Mt Eden time zone I find I can accomplish twice as much work and still have more pleasure time, if not leisure time, than I did in my rural solo workshop. Most of my pottery is domestic ware, I hope reflecting my belief that the production of well made functional pottery is itself a worthwhile goal.

My other continuing major interest is raku. This rather brutal firing method with great stresses being put upon the pot—and the potter—paradoxically produces a soft quality in pots that I admire. I also like the immediacy of raku—being able to view the pot at any stage during the firing cycle. In raku the interaction between clay, flame and smoke becomes a major component of the finished pot. Currently I am using smoke on stained, thrown forms with no glaze, to obtain subtle colour changes.

While my domestic ware helps assuage the appetite of the co-operative's 35 cubic footer, my raku is fired in Diana Wyler's 10 cubic foot L.P.G. kiln five minutes walk from my home. This is just one example of the sharing of resources possible in the city. I like to think that the co-operative spirit at the Potter's Arms extends to the wider community of potters in our neighbourhood.

From left: lustred teapot Peter Lange, bowls Nicky Jolly, Raku, Lex Dawson.

Nicky

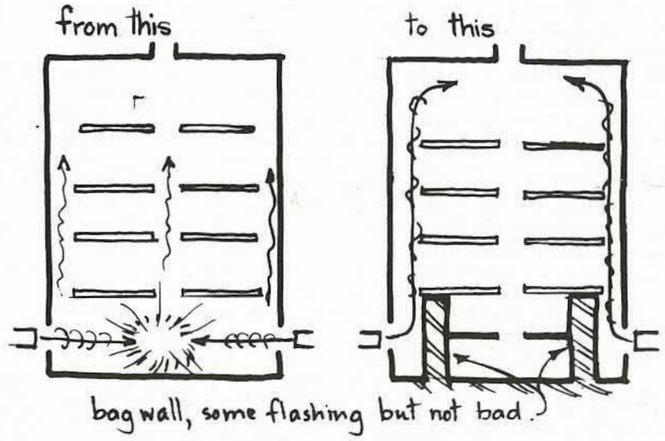
As a new potter I find the co-operative helpful. I absorb the differing technique and style of Lex and Peter and use what suits me from each. I learn through the shop what sells, what colours are preferred and I make use of the city's resources of pottery and books.

I make pots quickly with little finishing especially in my handwork as I believe if they are laboured they tend to look like it. Pots that feel good to touch and hold appeal to me more than delicate untouchable ones even in porcelain. Rarely do I use porcelain for its translucent qualities, but more as a background for colour. I like pots to look as if they are made with the hands, handles squished with my thumbs rather than pulled.

Firing updraught fibre and gas kilns

I fire a 35 cubic foot updraught mains gas kiln and have experience with smaller LPG and mains updraught kilns. Without exception the manufacturers of these kilns have little idea on how the flame in an updraught kiln should be distributed. They all tell you to fire at the base under a false floor and you do that and all the props collapse and the pots that survive have exciting fluffy white fibre bits on them and the walls of the kiln have similar shaped holes in them.

The basic principle with any updraught kiln, gas or otherwise is to throw the flame up the sides of the kiln to the flue and not create a fireball under the first shelf and hope the heat will make its way up. My first firing under the manufacturers directions had about a 4 cone difference and 4 collapsed bungs. I gradually evolved my system as follows:



Judicious use of the damper to create a completely flame filled kiln enables great reduction of almost perfect heat distribution. You also gain an extra 6" stacking space by using the floor.

Many manufacturers know how to build a box that will reach 1300° in 20 minutes but know little about firing pots.

Peter Lange

OUTREACH

City workshop with a big wood burning kiln

Outreach an extension of the Auckland City Art Gallery is housed in the old police station where Ponsonby Rd meets Karangahape Rd. Facilities tucked away behind those brick walls provide activity for printing, weaving, puppetry, painting, flax kit making and pottery.

The pottery department is well equipped with a slab roller, seven wheels, a gas fired raku kiln, an electric kiln and the 500 cubic foot wood kiln. Students may pay for space in the wood kiln and are encouraged to make big pots at classes.

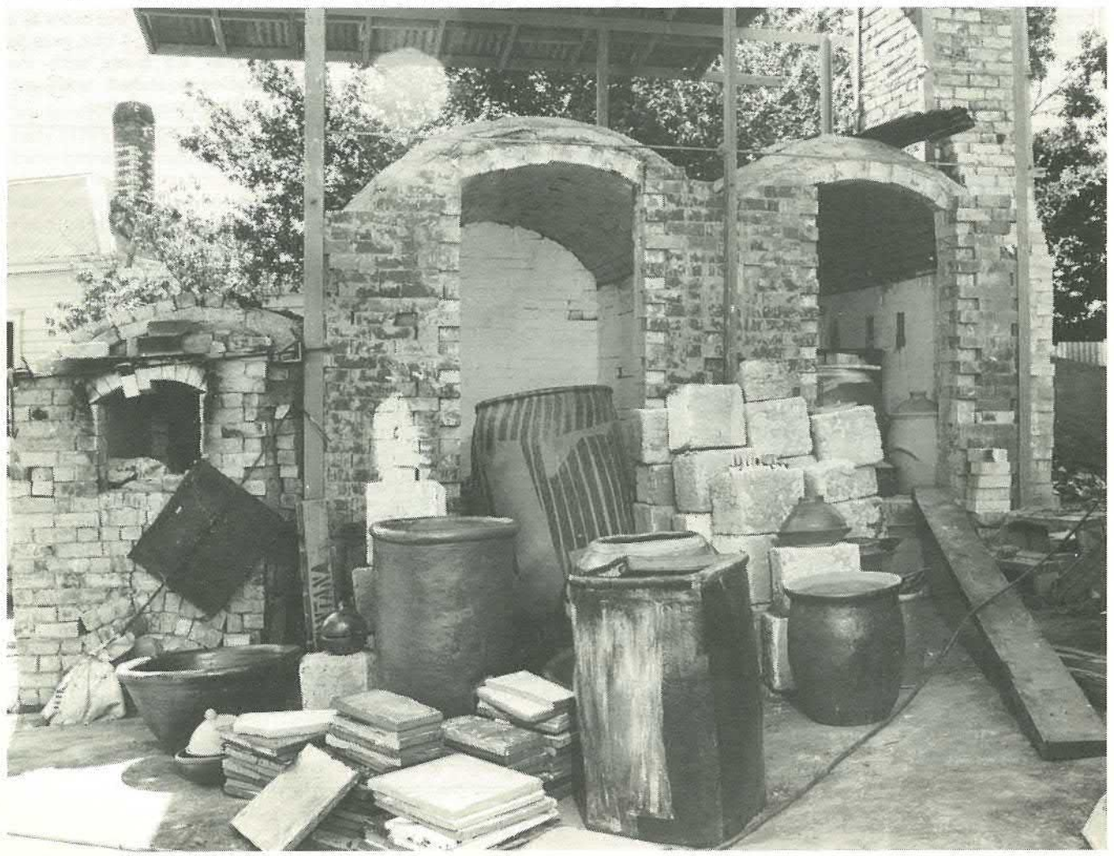
Before I came to teach at Outreach I was a full time potter in Central Otago. Having to come back to the city after living in the wide space of Otago has not been easy but I enjoy teaching and certainly having the use of the big kiln makes up for giving up my own diesel kiln.

People attending the four weekly classes are encouraged to come to more than one class if they can. They are also able to rent the studio during the week to practice throwing.

At present we are doing ash glaze tests in the stoneware kiln and using glaze formulas of the late Oswold Stephens in the electric kiln. This is only fired to 1100° to save wear and tear on the elements.

The gallery at Outreach is available to anyone. Work does not go before a selection panel or judge. It is in constant use by the unknown and the famous and gives young people an opportunity to exhibit their work.

Pamela Webster
Pottery tutor, Outreach 1981



Wood fired Kiln at 'Outreach'
Built by Matt and Kate McLean 1978

The kiln was conceived as a means of firing large scale works and sculptural pieces as well as pottery from Outreach's student classes. We also wanted the kiln to be large enough to be able to accomodate the work of inner city potters without their own kilns, or with large projects, in communal firings.

It was decided that wood was a suitable fuel because of: its availability from demolition and packaging sources within the city
absence of costly burners, safety and storage facilities
beneficial effect on some glazes and terracotta.

We've had about 14 firings to date, the first few being dominated by slab built pieces for a mural we worked on with Alberto Garcia Alvarez for Auckland University.

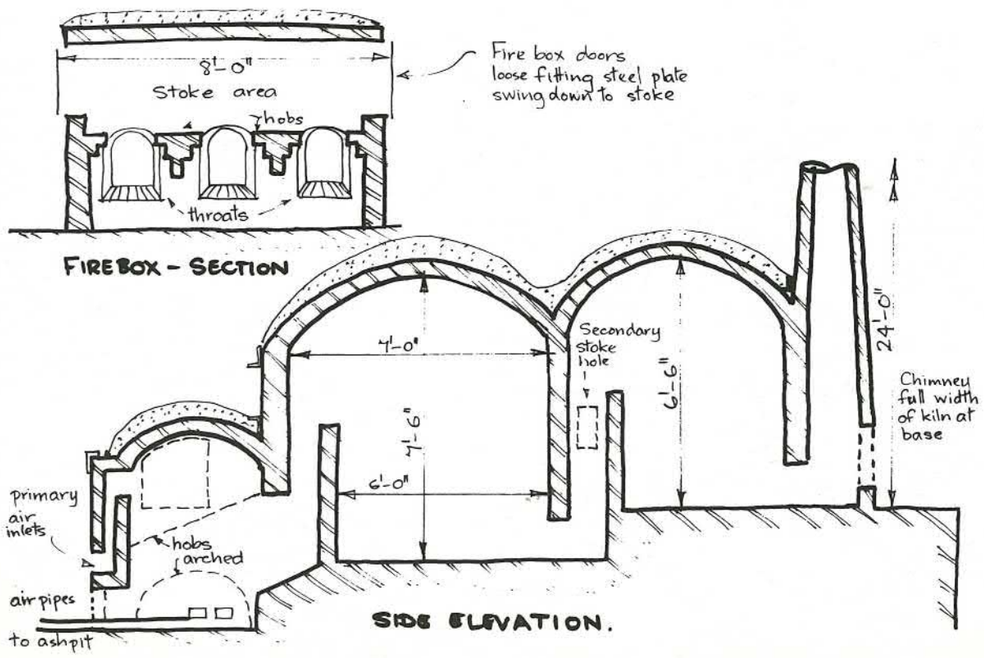
We find it handy to build very large pieces inside the kiln to avoid transportation.

Firings last about 20 hours, allowing for side stoking the 2nd chamber to come to and a long (6 hour +) warmup, keeping a low fire in the ashpit. At the end of this time 6 2" pipes are shoved into the embers at ground level, with a couple of bricks laid over their hot ends to prevent them from melting and the 3 ashpit cleaning holes quickly bricked up. A loose brick is left in each cleaning hole for secondary air fine adjustment. Now stoking of large timber onto the holes takes over, and the downdraught principle begins to operate.

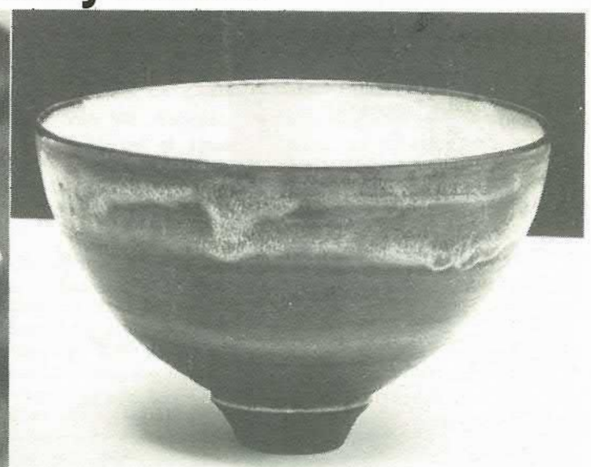
Primary air, for the ignition of the wood itself is warmed through the hollow front wall of the firebox. The flame is drawn downward and across toward the throats, mixing with flame and secondary air from the ash pit, which is kept thoroughly alive by air sucked through the steel pipes. Inside the throats, the flame meets another supply of secondary air, preheated in air passages under the kiln floor. I doubt whether these preheating devices produce any significant fuel saving, especially during reduction when we close them almost off anyway.

When side stoking the 2nd chamber we damper it down by pulling a series of bricks out of the full width base of the chimney, manoeuvring bricks into which ever exit flues we want blocked off, thus allowing us to draw flame into particular parts of the setting.

Relative proportions of chamber size to flue and firebox dimensions conform to the principles in Cardew's "Pioneer Pottery."



Fletcher Brownbuilt Pottery Award



Beverley Luxton's winning bowl. The porcelain bowl has an exterior coated in slip containing copper and manganese–the interior has a satin glaze lustred in the third firing. "When I started on this series my intention was to bring out the contrast of a sombre outside and a glowing inside varying from white to grey to pink. The main difficulty was finding a glaze which did not shatter the pot by stress created by glazing one side only."

An exquisite porcelain bowl won for *Beverley Luxton* of Auckland the premier award of $2000. There were 240 entries, 22 per cent of those from overseas potters: out of the 240, 100 pots were chosen for exhibition by the judge Richard Shaw of the San Francisco Art Institute. He viewed his short list of ten entries as representative of current international standards. The winning bowl "had a personal feel about it which made it into something special". Merit awards went to the other nine:-

Alan Fox, Dunedin, NZ, for "Hydra" hand built stoneware, a multifaced military monster described by Richard Shaw "funny and awful at the same time".

James Greig, Carterton, NZ, "solid and void series" slab built sculpture "good scale and nice perspective".

Connie Hoedt, Townsville, Queensland, Australia, "Microcosm" porcelain and pre-coloured porcelain (set of three) "I particularly like the change between the outside and the finely scaled landscape interiors".

Jon Alda, Gellibrand, Victoria, Australia, large platter "nice presence and nice drawing not overly stylised".

Yoshiro Ikeda, Manhattan, Kansas, USA, "Black Swan" wheel thrown and hand built, black glazed. "A sensuous piece that uses the material well with a good surface finish".

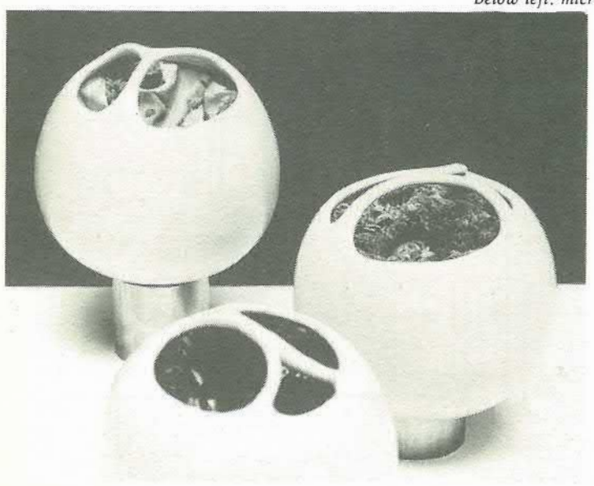
Walter Keeler, Monmouth, England, "Salt glazed teapot". "An imaginative way of handling a teapot. A real fluid feel with lay-back lines".

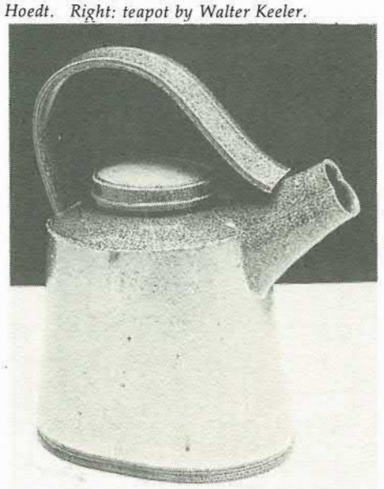
Leo King, Birkenhead, Auckland, NZ, "Control". "Sci-fi look handled well. The name Control says it all".

Ray Rogers, Waimauku, NZ, "Pit-fired floor pot". "A change from the ordinary with good surface treatment."

Steve Rumsey says "In designing the exhibition John Parker used an industrial unit, the forklift pallet, so the exhibition was permeated by the scent of freshly sawn pine. For award winners the display surfaces topping the pallets were ¼inch plate glass mirrors. The pallets were stacked in four ascending staircases each terminating with a large lighted candle."

Below left: microcosm by Connie Hoedt. Right: teapot by Walter Keeler.





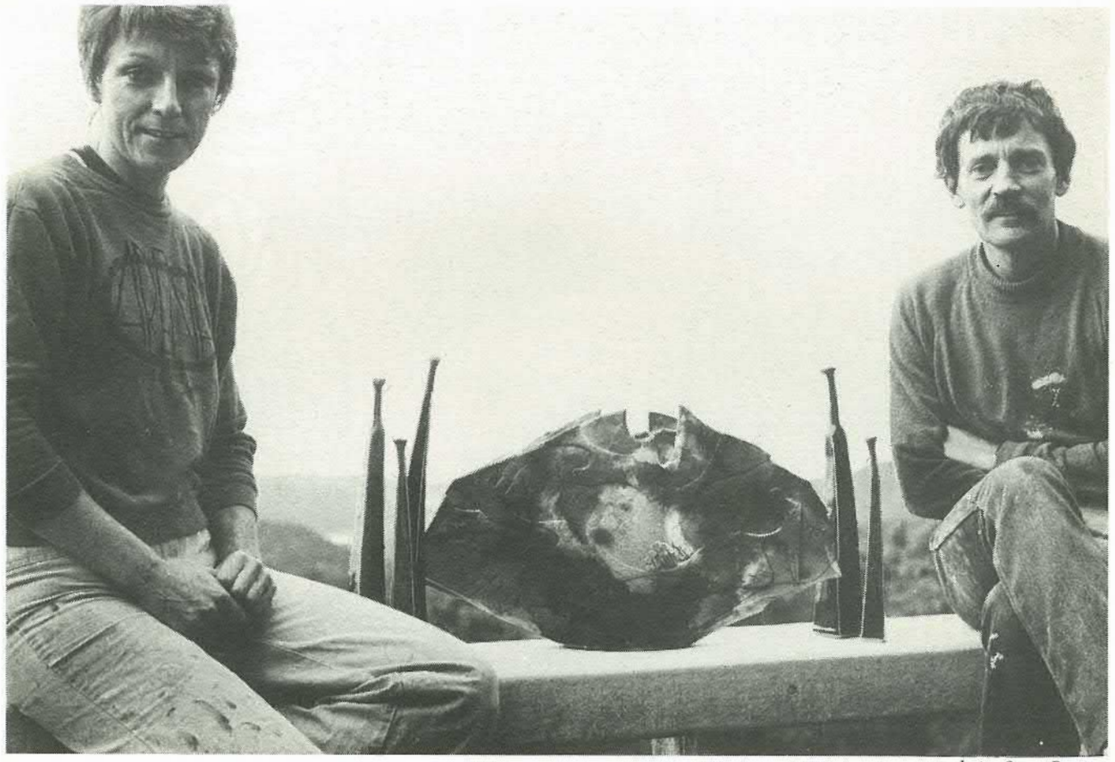


photo: Steve Rumsey

Five of our potters with widely differing styles contribute accounts of their attitude to pots, their making and firing. Moyra and Gary Elliot, Wendy Ronald, Gerald Hope and John Parker.

Challenge of the copper reds

Moyra and Gary Elliot, Auckland

"We live high on a ridge at the top of Auckland's Waitakere Ranges where dense bush separates us and the road. From our house and workshop there are panoramic views over the city and two harbours. Altering weather giving differing light patterns creates an ever-changing backdrop to our lives. Although our situation is rural, downtown is less than half an hour away and we regard ourselves as city potters making ware for city dwellers."

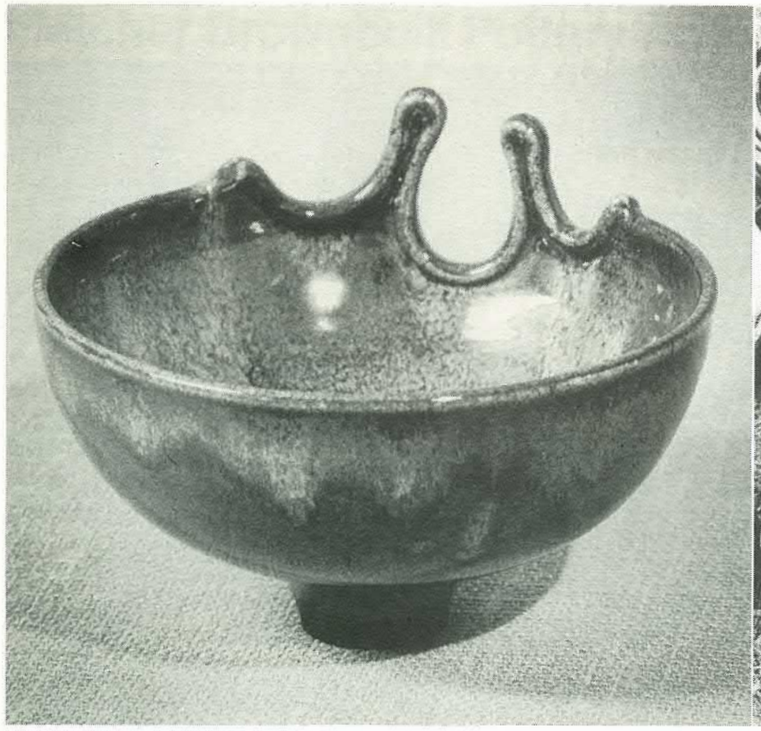
After an initial interest in ceramics developed in London at the Camden Institute, Moyra came through the usual night class routes. Gary's interest was at first only in firing the kiln—a fairly standard Cowan oil fired twin chamber—but this gradually extended to the full range of potting activities.

"Our current work falls into several distinct categories. The basis is a range of domestic ware with each of us making the forms we prefer, although Gary now makes the majority of the work. We look for the lightest appropriate weight and good functional form with fitting decoration. A good deal of time can be spent discussing and adjusting a new piece before it is included in the range. We can't resist the temptation to decorate the domestic ware although this is mostly confined to the lids. Most work is decorated with wax resist designs originally based on a non-oriental chrysanthemum and variations of this theme. We use a waxy matt base glaze (based on one of Royce McGlashen's) with tessha over. By varying the thickness of the overglaze application, the colour varies from rich rust to olive green on the one piece. We also regularly use cut work under a warm ochre matt spodumene glaze which breaks pleasantly on ridges and is useful for cooler areas of the kiln. We similarly use a Shino for the very hot parts.

We have recently experimented with oxides such as rutile and copper rubbed into bisque ware with celadons over this and the pots further embellished with on-glaze brushwork and stamps. Results have so far been patchy, at times really interesting and at other times plain awful and we have a lot more to do in this area before we can hope for more consistent results.

Gary enjoys making big pots crocks and urns, which he finds a welcome contrast to the smaller domestic ware. At least one is now included in the weekly kiln load. These are mostly thrown in two pieces to approximately the final shape, joined when fairly wet and the form worked again to completion.

Over the last few years we have been doing some work in copper red glazes. Gary's interest was kindled when he read an article. He chose a recipe at random and put in a test. Voila—brilliant carmine red. Hooked. We wondered what all the fuss about the glaze's difficulty was, then began to find out when subsequent firings brought variations on a dried blood theme. However we were by then determined to succeed and have kept experimenting. We now have four different glazes which give fairly consistent results, a purple/red, carmine, textured



Iridescent Pink Cones 9-10

pink and bright scarlet. They are all fussy about their kiln position.

We don't consider ourselves glaze chemists, we have learned by gradual adjustment and rule of thumb methods based on reading everything we can. It seems to us that the firing cycle is the most important factor for obtaining good reds. We reduce lightly from 800 °C then increasingly heavily to about 1200 °C (varied a little according to weather conditions), then light reduction to the end of firing. We have not found that a final burst of oxidation improves results at all.

Thickness of glaze is almost as important as the firing cycle and to get intensity of colour and texture we like, the glaze must be very thick. This has meant spectacularly coloured kiln shelves but we've largely solved this problem by spraying and tapering off thickness of glaze toward the base.

We get the best and also the worst results over a white body. Where the colour break is clean and even its great, but it can be patchy and messy, a happening that is less offensive over stoneware. We look for reds and pinks which have colour so intense that the mouth almost waters. Sometimes there are bonus little bright turquoise "eyes" within the texture of the glazes which heighten this effect. The reds are used on both handbuilt and thrown pieces where the form appears appropriate to the opulent colour.

Sculptural work based on landforms has been a interest since a workshop with Roy Cowan solved some persistent technical problems. The surface patterns of these forms are becoming more complex with landscape symbols—natural and man-made represented, (at least they mean something to me!). I've been intrigued recently to observe that despite sometimes violent contours of the land, subdivision is still in straight lines ignoring all convolutions. I've incorporated those ideas in the current series. I became dissatisfied with the effect of glazes on these works and the most recent forms have been first high-fired and subsequently smoked after application of heat sensitive chemicals like Potassium Dichromate and Ferric Chloride. There is a lot more work to be done to gain greater control of these effects."

Moyra Elliott
Quinns Road
Oratia RD Auckland

Purple/Red Cone 10

Potash Feldspar	13 lb
Silica	6 lb 6 ozs
Grertsley Borate	1 lb 10 ozs
Dolomite	9 ozs
Zinc Oxide	9ozs
Copper Carbonate	2 ozs
Tin Oxide	2 ozs
Bentonite	2 ozs

Needs a lot of heat but is best protected from direct flame.

Potash Feldspar	7 lb
Silica	2 lb 12 ozs
Calcite	1 lb 10 ozs
Copper Carbonate	1 ozs
Ash, washed x6	1 lb 2 ozs

this recipe can be varied to Chun blues by substituting 3.5 ozs iron for the copper. Results differ widely according to the type of ash—Kauri for soft pale blues, pine gave us aubergine tones over a white body.

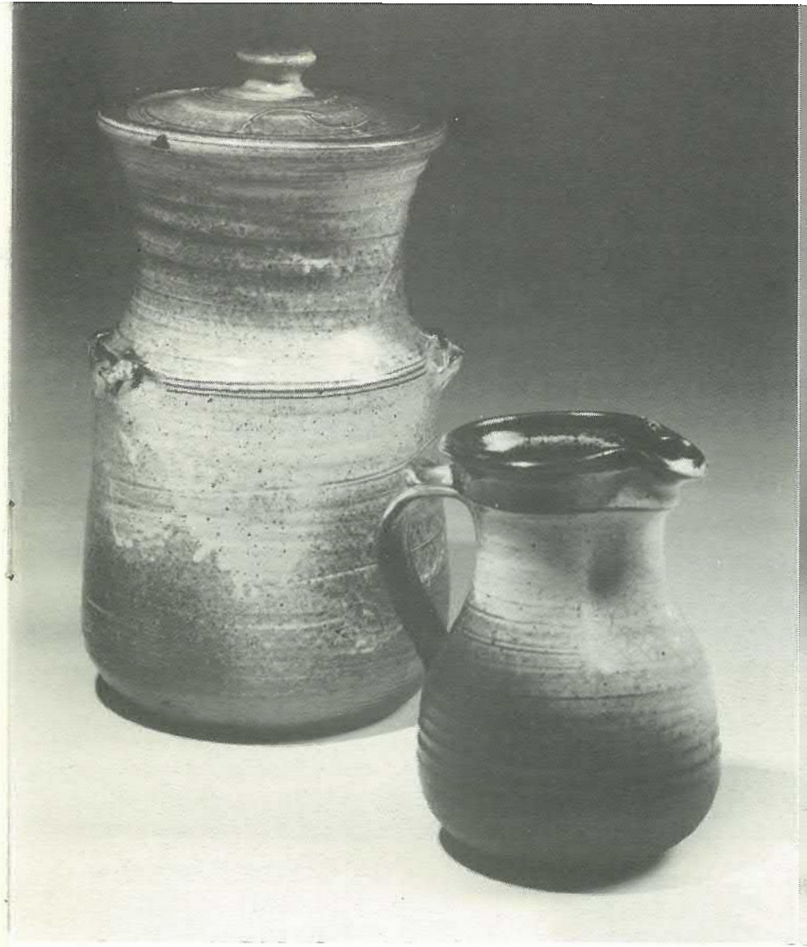
For more on copper reds see STUDIO POTTER Vol 8/1, Ed.

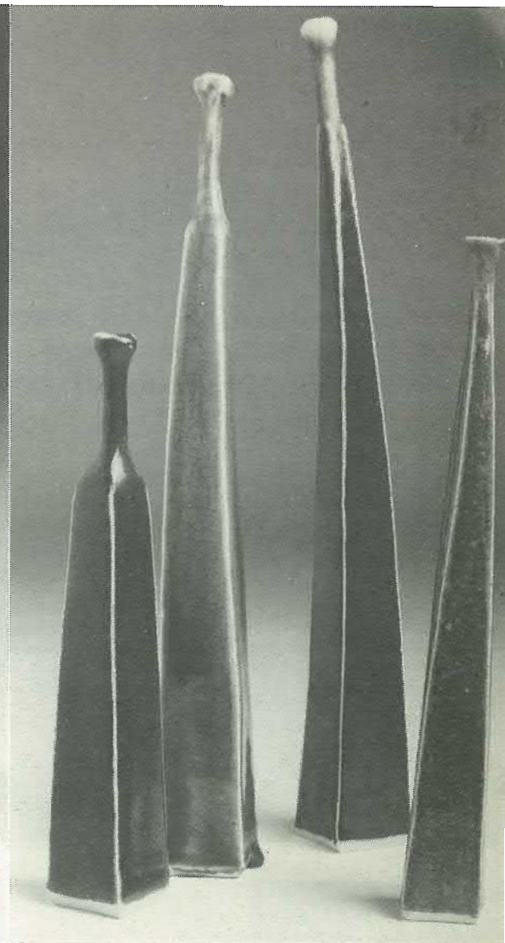
Royce McGlashen's stable base glazes

RCG	1260⅜57ŸŸ °C
NZ Feldspar	50
NZ Dolomite	10
NZ Calcite	15
Silica	20
NZ China clay (ultra fine)	40
Iron oxide (opaque matt)	1

Smokey	1260 °-1300 °C
NZ Feldspar	50
NZ Dolomite	20
NZ Calcite	3.5
NZ China clay	30
Coarse ash (40 mesh)	5

(apply thin, interesting at low temperature as well as high)





photos: Left opposite page shows one of the latest landform sculptures, smoke patterns formed by sawdust firing after the body maturing fire, flashings of orange from ferric chloride applied between firings. Above left: Stoneware jars 45 cm high made by Gary. 2 pt pitcher 25 cm high by Moyra, both shino type glaze. Right: Domestic stoneware made by Gary decorated by Moyra.
photos: Michael Dawson and Steve Rumsey

Porcelain forms 10-15 cm wide 10 cm high, copper red, purple and pale celalon glazes by Moyra. Over page left: Stoneware bowl 70 cm wide copper pink glaze by Moyra. Right: Handbuilt bottles in porcelain 28 cm-45 cm high, copper reds, purples and grey/blue chun glazes by Gary Elliot.
photos: Michael Dawson and Steve Rumsey

Domestic Wares

A little known Auckland Pottery Factory, **The Vortex Works,** was a rival to Crown Lynn hand thrown ware in the mid nineteen-fifties.

The Works, dating from around 1947, was a small owner operated business, sited first in Mt Albert and later moving to the Waiatarua area.

All the work was made by the owner from one clay source. The stylistic features of **Vortex Ware** are a single shiny glaze on simple forms with most surfaces being a heavily tooled ridging reminiscent of "coil" pottery.

Vortex ware was purely utilitarian, featuring ashtrays, cigarette boxes, planters, vases, flower troughs, bowls and pineapple stands — all indispensable in the modern home.

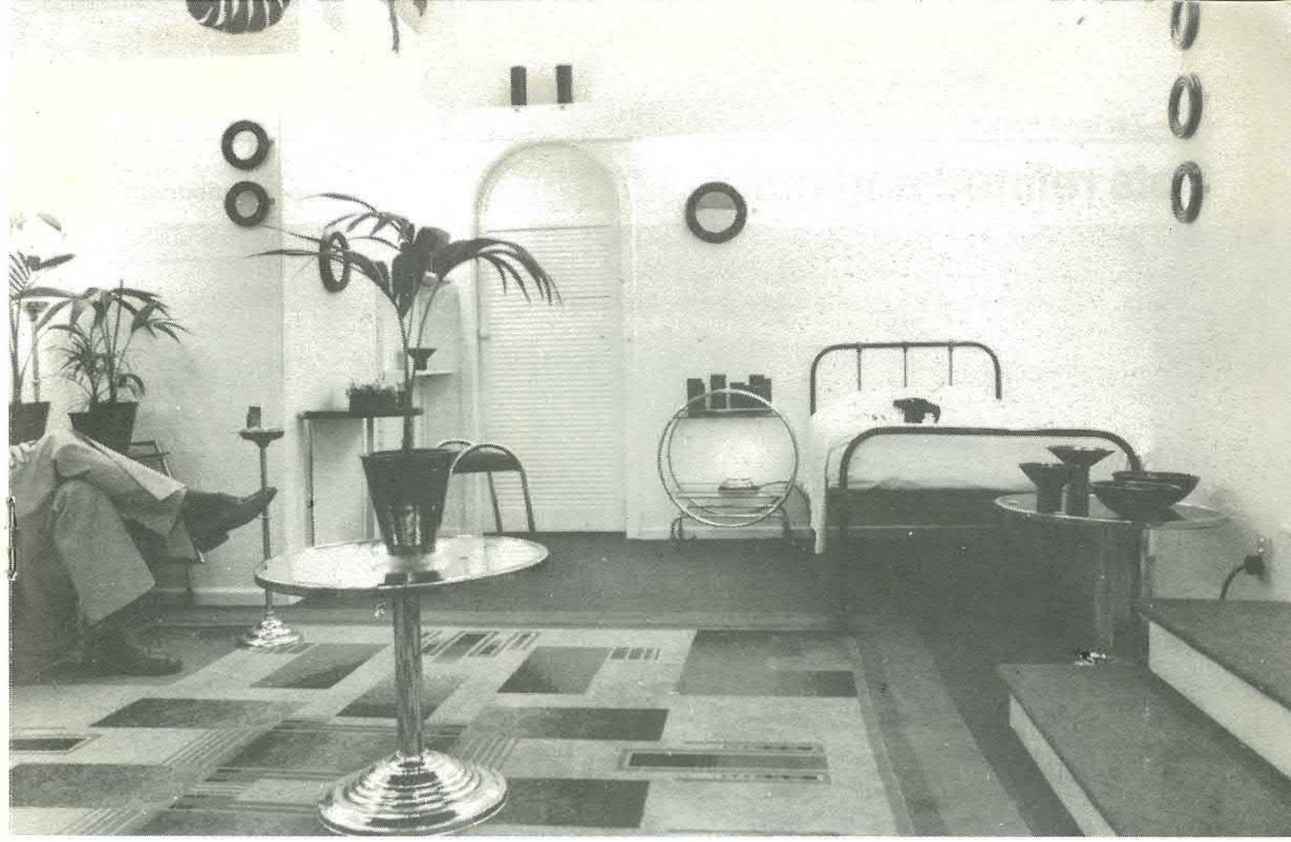
The work was relatively unnoticed in its day, as was the recent retrospective exhibition at Alicat Gallery, which presented the pieces in their appropriate lounge and sick room settings.

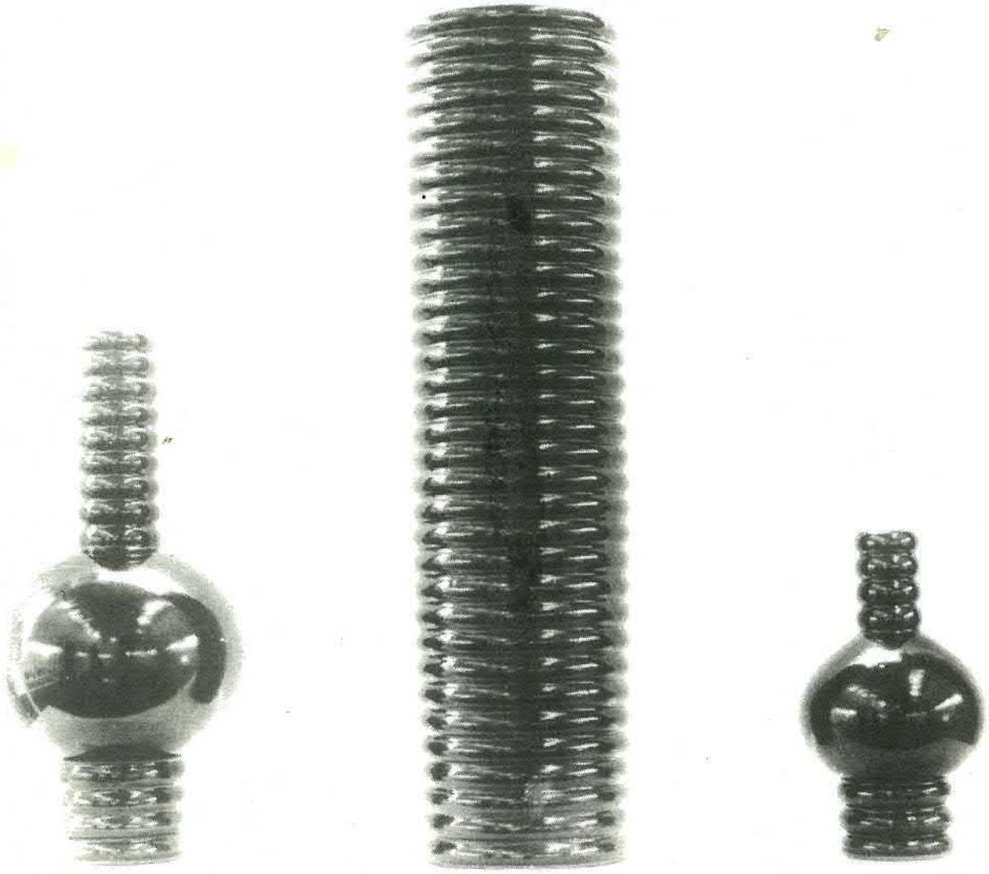
The **Vortex Works** had a limited output. Pieces are now eagerly collected for their rarity, and may have found their way into at least one important public or private collection somewhere in the world.

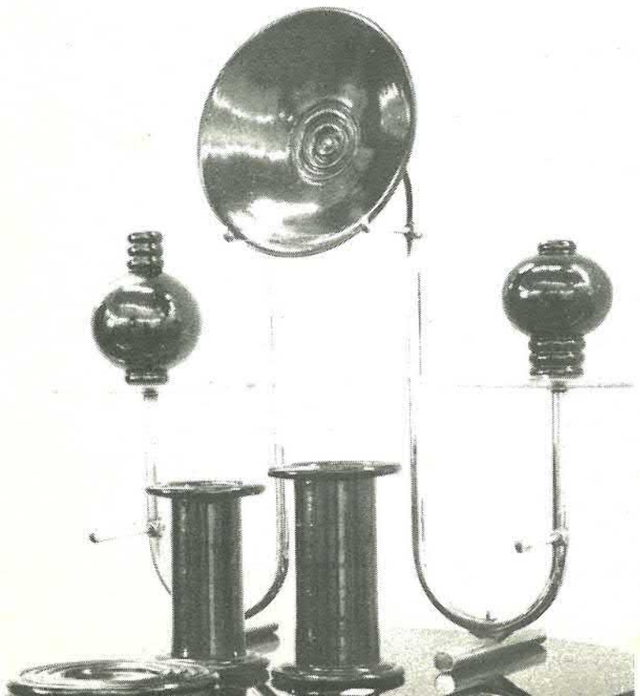
However, would be collectors should be wary of fakes.

John Parker

Photographs by Peter Shaw

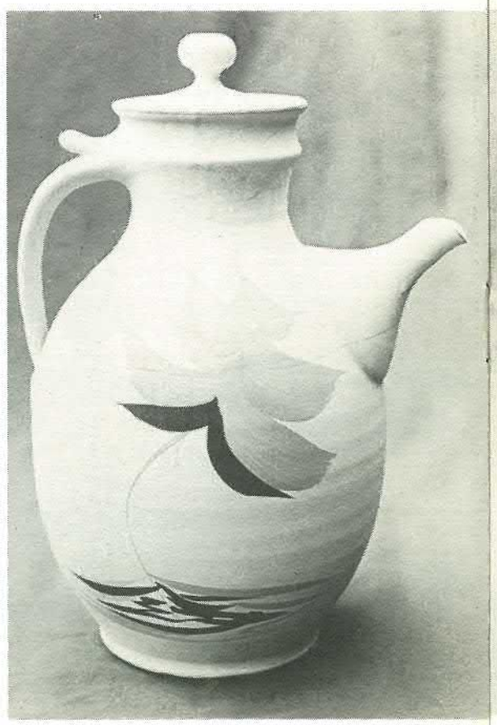




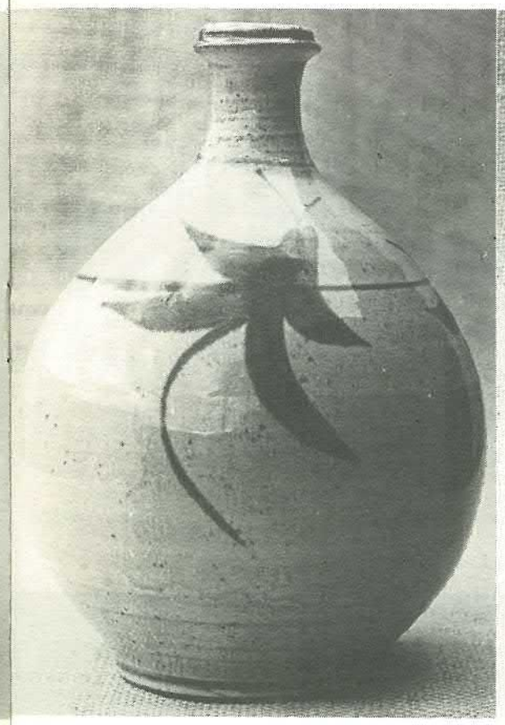


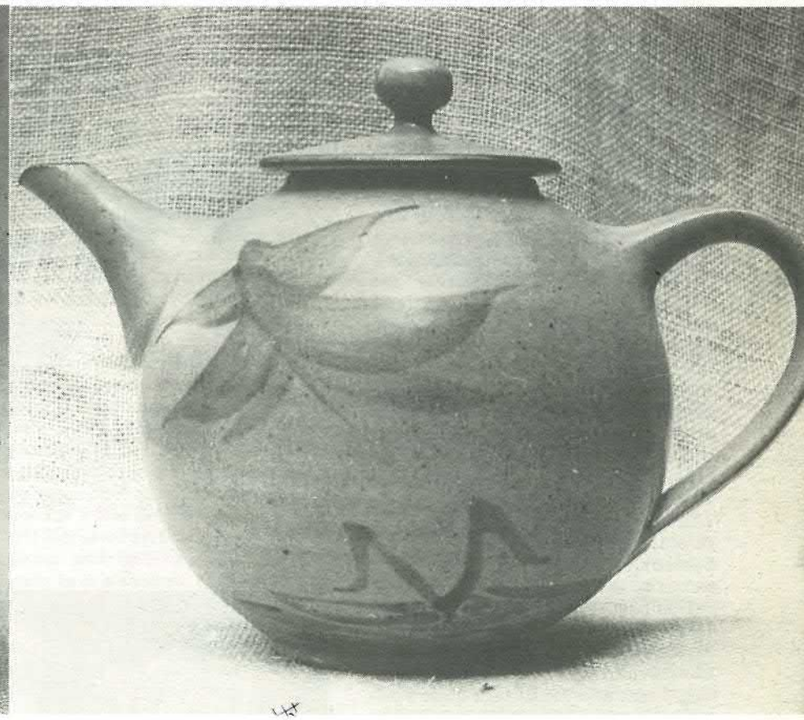
Pots refined and quiet

Gerald Hope, Marlborough



Studio on the beachfront, big coffee pot, 310 mm high, bottle white glaze with cobalt decoration, teapot (6-8 cups) base glaze, pure rutile decoration. photos: Paul Restall





My first opportunity to work with clay was provided at Wellington Teachers College by Doreen Blumhardt over the years 1969-71. During my early teaching years weekends were set aside for establishing a pottery workshop, I built a wheel and a kiln after the plans in NZ Potter 16/2. This kiln is still in use with only minor modifications over the years.

Living in Blenheim in the early '70s in comparative isolation from other potters made for self reliance. In hindsight my early pots were over influenced by magazines and books rather than by design consciousness and by the limitations imposed by using local materials. A trip to Britain and the opportunity to visit numerous potters helped consolidate my style, which is for refined, careful workmanship and quiet glazes.

In 1977 I commenced as a full-time domestic potter at Rarangi, Marlborough. The workshop is situated on the shores of Cloudy Bay with a view that takes in historic Port Underwood and the North Island mountains.

Diesel is still the most viable fuel for South Island potters. My oil kiln is efficient for its size but could be improved with a ceramic fibre internal lining. However, when I needed a bigger kiln, I chose a 20 cubic ft ceramic fibre down-draught fired with LPG. The kiln has four burners firing vertically, taking six hours to bring the kiln to 1100°C, a further three hours in reduction and gaining a further 20°C in a final two hour soak. The two kilns are fired alternately with indistinguishable results, though with LPG natural glazes using papa and ash have a more even quality. LPG can enhance the colour of a good glaze.

ADAPTING TO LPG

The firing cycle of Nelson RMK2 and the glaze recipes to follow are closely related.

bisque to 900°C
glaze to 1280°C
(6- 7 hours)
(10-11 hours)

Note that the reduction cycle and length of firing is critical. By hour 8 (1260°C cone 8) should be reached, over the next 2-3 hours 1280°C. Then finish with a balancing soak. Reduction in the diesel kiln is automatic from 1000°C upwards, probably due to tight stacking. I waste little space and allow the burners to oxidise only at the end of firing.

The gas kiln is different. To achieve the same results I follow exactly the same length of firing cycle. I tried fast firing (6-7 hours) but wasted fuel and ruined glazes which became glassy and harsh. To repeat the diesel fired results follow the established cycle, but because the gas allows finer control note the following:

0°C-1100°
over 6 hours—neutral flame
1100°C-1260°C
Reduction setting over a 3 hour period
1260°-1280°C
Soak included for balance
Total 11 hours

The early flame is not reducing, but neutral. I don't use a gas analyser because I have developed a visual technique for adjusting the burners from neutral to reduction. It works like this. Four burners are firing vertically, close off the primary air until a strong yellow light reflects on the floor beneath the kiln—when the flickering glow is constant you have a reduction setting. For a neutral setting open the primary shutters until the glow just disappears. This simple technique works well.

The use of the damper in this kiln is most important. During reduction the damper should be closed slightly causing only a lick of flame at the flue—it may be necessary to decrease the gas flow—try for a compression of flame within the chamber as evidenced by flame at the lower spy hole. A balanced reduction can then be achieved. The final two hours is a solid soak period bringing all cones to the required degree of melt. For best results I close my damper by as much as ¾ and reduce the gas flow to a minimum. The pyrometer is essential for maintaining temperature. The burners are neutral at this stage and the kiln is using all heat generated.

When I first started potting I made the mistake of having too many glazes mixed, but failing to develop them fully. Now I use one for most of the work—a glaze I obtained from a printed source and modified. If fired using the cycle mentioned, it can be fat and lovely.

BLUE GREEN GLAZE

Feldspar (Mintech F)	1512g.
Dolomite (Mintech D)	504g.
Calcite	84g.
(Lime & marble red stripe)	
China clay	900g.
(Mintech G.M.35)	
Add 1 level teaspoon of Cobalt Oxide (note small measure)	
Add 1 level teaspoon of Chromium Oxide (note small measure)	

If no colour required leave oxides out.

For a very soft ash glaze which is better suited to a cooler placing in the kiln—as overfiring makes it glassy green—prepare clean, washed, hardwood, e.g. Macrocarpa, as follows.

Use the already mentioned base glaze.
Increase the china clay to 1000g.
Add clean ash-dry weight of 375g.

Over this glaze base I use various combinations of oxides to decorate. My decorative technique is based on traditional calligraphic brushes or whatever else in readily purchased brushes catches my eye. With a little effort and boldness applied decoration can enhance a basic pot.

Basic washes contain either red iron, rutile or cobalt—or any other material or glaze that can add richness to a surface. All washes are mixed in readily available screw top jars which make ideal shakers.

The degrees of thickness of application will effect the colour.

Washes

Red iron oxide	50g.
Illmenite (course)	50g.
China clay	50g.
Red iron oxide	100g.
Rutile	50g.
China clay	25g.

Natural glazes using soft rock—Papa—which is found throughout New Zealand e.g. Awatere Valley; Marlborough, or on road cuttings is worth experimenting with.

The range of colour is wide with variations caused by additional materials such as ash.

The following recipes should be thinly applied for initial experimentation.

Red-Green-Yellow
(dependent on reduction or temperature)

Papa	750g.
Ash	250g.
Plus either Tin Oxide*	25g.
or Feldspar*	30g.
or Calcite*	10g.

*Use individually with papa/ash mix.

Gerald A. Hope
Wairua te Wairau Pottery
Rarangi RD3 Blenheim

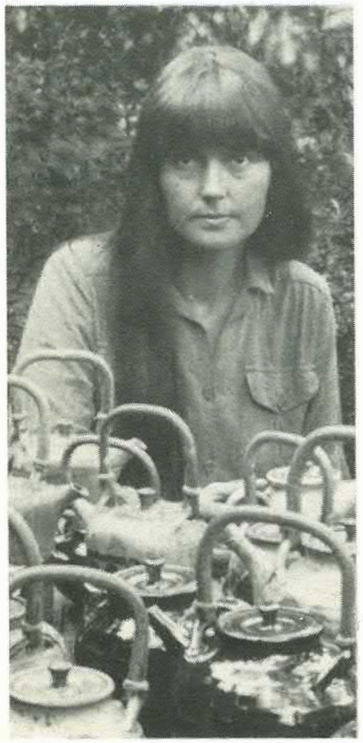
Slowly and carefully with hand pinched pots

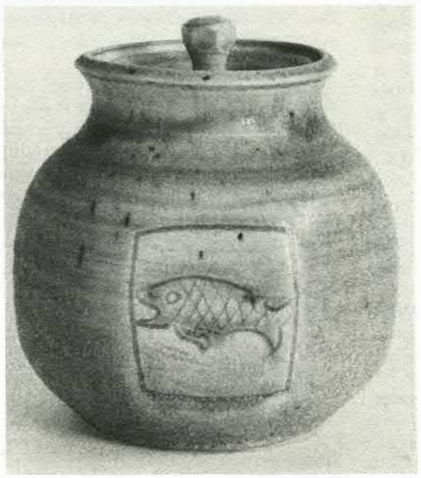
Wendy Ronald Auckland

A weekend workshop conducted by Patricia Perrin and Rosemarie Brittain introduced me to porcelain clay and hand-building. I like this method of working so after six years potting at home with pre-schoolers about, I built a small two chambered diesel kiln and turned a hobby into a full-time occupation.

I did not have a great amount of success with finely pinched porcelain bowls at first, until I read Mary Roger's book. Here I found most of the answers. To get the results I wanted I had to be prepared to work more slowly and carefully paying more attention to form. There is a particularly high mortality rate in this type of work. Finger print denting can be a problem and to overcome this patience is required for scraping away—difficult inside a tulip form. I have encountered few problems over glazing or firing although there is always the possibility of slumping when firing to 1300 °C. Sometimes slumped flared forms turn out to be the best.

Half my work is stoneware—from Jack Luckens clay bought at nearby Hobsonville. My porcelain is a mixture of wheelthrown domestic ware, bottles, vases and handwork. I use Podmore's porcelain clay for its translucent qualities.





Above: pinched porcelain sea green glaze and collection of rose coloured porcelain bowls. Left: hexagonal porcelain jar in sea green glaze, bought by Auckland Studio Potters from a one man exhibition at Alicat Gallery.

Copper reduction in raku firings

Bill Malcolm

Raku firing differs from other kinds of pottery firing in only one important way—at the end of the firing, pots are reduced outside the kiln. There are myriad kinds of raku kilns and pot-handling tools and firing techniques, but in virtually all the variations, the red-hot pot ends up reducing in a fuel, usually sawdust. That external reduction is the flashiest part of a raku firing, and it's what on-lookers remember most. But it's also the part that goes wrong most easily. Indeed, raku potters have so much trouble getting good copper reduction that they often don't even expect to. They prize the rare penny-copper lustres that unexpectedly turn up, but they despair of making every firing a success. Admittedly, few of them grumble at such mean results, because they fire raku just for fun (at potters' do's and weekend workshops), or else for secondary-school demonstrations where, some claim, good results aren't important ("We're teaching attitudes here, not techniques.") And besides, part of the ancient raku mystique is accepting whatever comes out of the firing. That centuries-old tradition sits altogether too well with the current laid-back school—"Hey man, we just get into it, ya' know, and whatever happens, that's cool." Well, often as not what happens in raku firings is a bright purple disaster, and if those same potters suffered such dismal dart-board results in their bread-and-butter stoneware firings they'd smartly find a fix or go broke. And happily enough for raku potters who do want to control copper reduction, the fix is easy—if you meet three conditions, you can reduce copper whenever you like: (1) the pot must be hot enough, (2) the fuel for reduction must be dry and highly flammable, and (3) the pot must be muffled (sealed off from the air). Now let's see why.

Reduction is a gain of electrons. And, because accounts in our universe are kept strictly, electrons gained by one thing must have been lost by something else nearby. That loss of electrons is oxidation, so wherever reduction is going on, oxidation can't be far away. In a raku firing, green copper carbonate brushed onto a pot changes to a brilliant penny-copper because electrons leave the sawdust (it's oxidised) and go to the copper (it's reduced). Trouble is, there's something else near the pot that's far more likely to pick up stray sawdust electrons than copper is. That something else is oxygen, and it's the certain ruin of copper reduction. Hence the need for a muffle, like a tin can, to keep oxygen away from the pot during the reduction. If you just dump the pot into sawdust in the open air, sure the sawdust burns (oxidises), and loses electrons, but oxygen in the air quickly swoops up those electrons and the copper never gets them. The *oxygen* is reduced, not the copper, and who needs that?—after all, reduced oxygen is just water. But with a muffle over the pot, the wee bit of oxygen inside the muffle is quickly reduced to water and so can't do any more harm. But the sawdust continues to oxidise (lose electrons) *even without oxygen* because at such a high temperature, the copper on the glaze grabs the electrons lost from the sawdust. In doing so, the copper is reduced. So that's what you need for copper reduction—a hot pot, dry fuel, and a muffle. If you see to those three things, you get copper reduction every firing. Now for a few details.

(1) Get sawdust that's bone-dry, untreated and free of chips. Tamp it firmly into a shallow basin—6 inches depth is enough for even big pots. Site the basin close to the kiln on a sturdy table, and clear everything from the short path you'll take between it and the kiln when you're firing.

(2) For muffles, get tin cans with joins that are crimped as well as soldered—joins that are merely soldered will buckle open as the hot pot melts the solder, letting in oxygen and ruining the reduction. Choose cans about 4 times the volume of the pots you're going to fire. If they're much smaller, the pots will coat with hard-to-remove wood tars and resins, and if much bigger, the sawdust can't reduce the oxygen before the pots cool so much that they won't reduce fully.

(3) When firing, set the hot pot down gently on the surface of the sawdust. There's no need to jam it into the sawdust, but if you like the speckling that sawdust makes where it touches melted glaze, either lay the pot on its side or throw a handful of sawdust at it just before you put the muffle on. But get the muffle on quickly, and twist it down firmly an inch or two into the sawdust.

(4) If you like a mixture of reduced and oxidised copper (red, green, blue, and yellow as well as penny-copper), lift off the muffle after a minute of reduction, letting in some air (the sawdust will burst into flame, so be careful). After 10 to 30 seconds, replace the muffle, again twisting it down into the sawdust, and put out any fires. You'll get paua-shell iridescence that way—oxygen in the air that you let in strips electrons off not only the sawdust, but even the already reduced copper, partially oxidising it and colouring it with rainbow hues. That same process carries on even after the pot is cooled to room temperature, but more slowly—the pot tarnishes. Tarnishing is an everyday reminder of the thermodynamic reality that everything in the universe is steadily going bung. If you want to stop that entropic tailspin on your raku pot, you must lacquer the pot or get into a Brasso routine.

(5) Whatever you do during the reduction to get special effects, don't remove the muffle until you can safely touch it with your bare hands. By then, the pot is fully reduced and any raw body is blackened, the sawdust is heavily charred, and the smoke is gone. Some raku potters water-quench while the pot is still hot—it's a flamboyant end to the firing, but it's also a quick end to many of the pots, and it's altogether unnecessary.

(6) If your pots turn out green rather than penny-bright, yet your sawdust is dry and the pot is well-muffled, then you're either not heating the pot enough in the kiln or else you're letting it cool on your way to the sawdust. Waving the pot in the air is dramatic entertainment for on-lookers, but if your aim is copper reduction, it's plain silly.

(7) Some raku potters bury their pots in the sawdust rather than use muffles, but burying is a poor substitute. For one thing, you don't exclude all the oxygen so you may get patchy reduction or none at all. For another, you make a lot of flame and smoke. Admittedly, you're tempted to think that if you've got a furious fire going, then you've got furious reduction too, but you're wrong about that—the more flame and smoke you make, the less copper you reduce, because as we've seen, your sawdust's electrons are going to oxygen in the air rather than to copper on your pots. Besides, you irritate the fire brigade and your insurers if the flame gets out of hand. And, the smoke assaults you, on-lookers, and anybody else unlucky enough to be downwind, with nose-and-throat ills at the least, and with bronchitis, emphysema, or lung cancer at the worst. That sounds exaggerated, but isn't—the smoke is highly reactive and chockers with carcinogens. It could start something serious for the unlucky few, and anybody who works in it constantly is taking big risks. There's no excuse carrying on when going smokeless also improves the reduction effects. The same criticism holds for a low-fire potter who wants only to smoke his pots, and maybe doesn't even glaze them—without a muffle,

he's putting less char on his pots, not more. And if he wants only partial charring, like a flame mark, he can get it smokelessly by using a muffle much larger than the pot (say 10 times the pot's volume), or by wetting the sawdust to make it less flammable, or by firing to a lower temperature.

You can fire raku in a white dinner jacket or gown and come away spotless, with no sore throat or burning eyes, and your only hurt is from aching arms toting all those pots with copper reduced just the way you want it.

Bill Malcolm, an expatriate American, pots with his wife Nancy at Sunday Creek Pottery, Stanley Brook RD2 Wakefield. He also farms cattle and trees. In the next Vol 24/1 he promises a production raku kiln.

Summer workshops

Self Sufficiency Course 1981—Harry Davis

Early in the year, twelve potters completed two weeks of intensive learning at Crewenna Pottery Nelson. They were mostly from the younger generation of potters still in the process of setting up their workshops—three were from Australia.

The first day was an eye-opener to all when Harry showed his self sufficiency techniques in drilling and cutting metal by using tools we could make ourselves. Projects were discussed and it was decided that two ballmills, two pugmills, a blunger and a toggle or brick press would be made. Several of the trepanning tools for cutting metal, and the parts for the beam drill were also made. All projects were completed, or nearly so.

Interspersed between the cutting, drilling, filing and hammering of metal were the other facets of self sufficiency in potting which were more directly applicable to our own workshops. How to make our own pyrometric cones, how to make saggers or setters for plates and bowls, how to make kiln furniture, props and shelves, how a simple filter press can be made using a vacuum rather than pressure.

Evenings were spent pleasantly with talks on geology (Harry has an excellent collection of minerals to illustrate the subject), talks on glaze formulation; slides showing aspects of the Peru project and always given with a friendly exchange of knowledge.

Field trips were organised taking us inland to see different clay and mineral deposits and the type of country where these can be found. Over the Takaka hill past Collingwood we saw the commercial clay pits, the iron-ore quarry, the dolomite quarry weathering granite and silica sand.

The group was thankful to Harry and May for their wonderful hospitality and for passing on so much of their knowledge.

Bruce Martin

If you are interested in taking part in one of these courses conducted by Harry Davis, write to him at Crewenna, Wakapuaka, Nelson RD1. There is a waiting list.

Patea, Taranaki, $25, limited to 30 participants, write to John Rough, High School, Patea.

Royce McGlashen, Nelson, summer Jan 24-31, autumn 7-14 March, details S.A.E. Cob Cottage Pottery, Brightwater, Nelson.

Borland Lodge, Monowai, Southland, 16-24 January, tutors Roy Cowan and Jean Hastedt, write to Audrey Simmons, Heddonbush RD1 Winton.

Potters convention

Following the success of Ceramics '81 at Palmerston North, it has become apparent that New Zealand potters are hungry for more. As John Pollex said after the Don Reitz show, "it's a pretty hard act to follow". "Clay—The Convention of the New Zealand Society of Potters" follows with a different act. The Nelson Potters Association will host the convention, for all potters, during Labour Weekend. The weekend will feature New Zealand—its materials and potters. Ten well known potters will be working over two days during the weekend. On Saturday 24th, Len Castle, Neil Grant, Jack Laird, Debbie Pointon and Rick Rudd will work for six hours—each doing their own thing, but working together. The audience will be able to see them all at work, and will be kept in touch by an M.C., who will field questions, and keep everyone in touch with what's happening, and why. On Monday 26th, the five potters at work will be; David Brokenshire, George Kojis, Royce McGlashen, Chester Nealie and John Parker.

Throughout the weekend, the pottery department of Nelson Polytech will have (literally) tons of clay available for participants to use, and low temperature kilns, fired with wood, gas, diesel and sawdust will be operating continuously over the three days.

A wood fired kiln will be fired to 1300 °C on Sunday 25th. Pots fired in this kiln, from potters all over the country will be auctioned during the afternoon of the following day.

Most of the problems of National exhibitions have been eliminated for the Nelson exhibition. No selection (only convention participants can exhibit). No freight (bring your pot with you—take your purchases home too). No bickering about setting up (if you feel that strongly about it, come and help set it up). If you missed Palmerston North, most of the video material taped there will be shown continuously during the weekend. There'll be a yoga workshop, a forum on firing with gas, competitions, a creche, films, social functions, and much more. As well, the A.G.M. of the New Zealand Society of Potters will be held on Sunday October 25th, and as with all A.G.M.'s, the doors will be open to all.

CERAMICS 81

A record of the symposium by New Zealand Society of Potters contains kiln plans, glaze recipes of interest to all potters. A chapter on the low-fired workshop.

Retail $4.95, discount to members of pottery societies. Contact them or write NZSP PO Box 881 Auckland $4.95 Aust.$4.95 USA and other $US6.25 Britain £3.80

Potting in Waikato

Hand crafted pottery was first made in the district by Elizabeth Lissaman. She worked in isolation near Morrinsville making earthenware from the early '20s. General interest developed from two part-time classes taught by Brian Batten, a Hamilton art teacher, as early as 1962. Among potters attending the classes were Margaret Radford, Peggy Judge, Elizabeth Woodfield and Val McArthur. Toby Easterbrook Smith arrived from Wellington in 1965, built a Cowan type diesel kiln and made domestic ware including particularly handsome cider jars. Eric Flegg took regular monthly workshops at Teachers' College from 1969; few potters in Hamilton have not benefited from his in-depth tuition.

A locally well-known pioneer potter of particular interest is Enid Lyons, who uninfluenced by others, has an ability to model clay in the trompe-de-l'oeil manner that is rare and controversial (see photo).

Brian Batten's evening class became a day course at the newly named Waikato Technical Institute in 1970. Margaret Radford became fulltime tutor, then Kevin McCaskill and finally in 1980 myself.

In 1971 at the Hamilton Society of Arts, local potters had their first experience of oil firing in a brick kiln built for community use. John Mitchell of Te Awamutu supported by Peggy Judge and others formed the Hamilton Society of Potters in 1972 and had their first exhibition in October the following year. Melis Van der Sluis set up his workshop/gallery in 1968 giving Hamiltonians opportunity to see the processes of making and firing and also to buy locally made pots direct from the potter.

Learning to pot has not been difficult. Weekend workshops from well known New Zealand and visiting overseas potters have each left their mark.

Few local full-time potters have been seen at national level. Margaret Radford (now of Warkworth), Kevin McCaskill at Raglan, Barry Ball at Te Kuiti, Peggy Judge, Ann McCartney, Val McArthur and Elizabeth Woodfield in Hamilton are the exceptions. Suggested reasons are the conservative audience and the extraordinary amounts of pottery made by part-time hobbyists, meeting the needs of most local buyers. Too many potters spending time teaching rather than potting! Perhaps also far too many still looking for a direction, attending classes where yet another style is offered. Eclectic work "reminding one of someone else" often results.

As in most smaller centres, work matures at a slower pace; pottery of strong conviction might be just around the corner.

Don Thornley

Anne McCartney

Anne McCartney has been potting full time for ten years gaining experience through Hamilton Potters Workshop and week-end schools. She specialises in domestic ware and has been developing her interest in burnished and smoked pots. She has been firing a large Cowan type down draught oil fired kiln, but has changed recently to a 17 cu. ft kiln firing with gas and is finding this kiln easier to handle.

HONEY HOUSE CO-OPERATIVE POTTERY WORKSHOP

When the pottery workshop I established at Timatanga Commune phased out, I decided to look elsewhere. I was still committed to the communal workshop idea. I accepted a full-time pottery tutoring position at Waikato Technical Institute in Hamilton and put an advertisement in the paper for a property near the city. That's how I acquired a big lead-light-windowed house to live in, an orchard, walnut tree and grape vines, and furthermore an historic concrete walled shed of 2000 sq ft: an old honey processing factory on the main highway between Hamilton and Te Awamutu. It was the perfect place to realise my frustrated Timatanga dream.

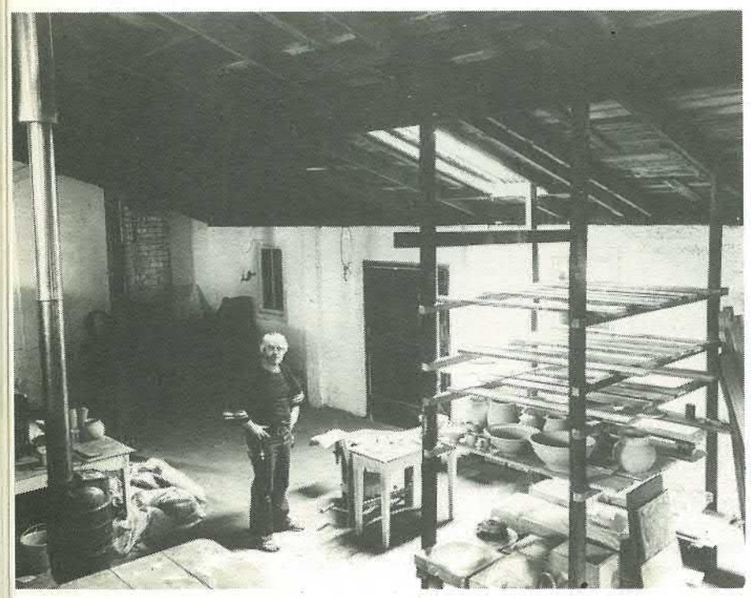
An establishment grant from QE II helped with the workshop's 30 cubic foot Olsen fast fire kiln and a raku trolley kiln—gas and salt kilns to come. All potters are young in experience, three are students I have taught, one a graduate from the Otago Polytechnic course and another self taught. We have a showroom with space for guest craftsmen to exhibit and the usual Raku Days to stimulate the public. What is less usual is our intention to provide space for a guest potter to work for a making cycle of six weeks or longer if it is seen to be of mutual benefit.

We all feel we have been enriched and challenged by this sharing venture.

Above: members of the co-operative, Helen Lynch, Robert Allan, Betty Litchfield, Don Thornley, Anna Amies, Phillip Wiles.
photo: Ross Clayton

Don Thornley
Ohaupo Pottery
Ohaupo RD3
Hamilton

Below left: Don Thornley in the Honey House. Right: an example of Don Thornely's recent work, teapot 16 cm high black slip under white satin opaque glaze.



Gaynor Nairn

I started potting at Feilding night school way back in 1962 at John Fuller's first classes when none of the students initially knew the slightest thing about pottery. Eventually, with advice from the late Lee Thomson ("You'll never get anywhere potting once a week"), I set up my own pottery.

My husband built my first wheel with milking machine pulleys for weight, two car bearings, emery stone for wheel head and a tractor seat to sit on and I still use it, although I weakened a few years ago and bought an electric one as well. Laboriously I measured Flora Christeller's original Roy Cowan kiln at Pinehaven and was four layers up when the plan was published in *New Zealand Potter*! I had already built a small smokey twin-chamber drip feed natural draught kiln which reached 1100° in five hours and took another five hours to reach 1280°. After about three firings in the Cowan kiln I felt some degree of confidence and by 1970 when we sold the farm to move to the King Country I think it was at its best.

In 1973 I completed a larger version of my original kiln fired by Twiss burners, a big improvement on the pot burners. I am seriously considering a gas kiln — it must be lovely to feel clean at the end of a firing.

I now teach night classes at Piopio College and although I have not produced any great potters they are more discriminating buyers and I consider that important. Some craft shops are so desperate to buy that anything goes; if we educate the buyers we can eliminate that poorer quality pottery.

One thing night class teaching has taught me is that there are other means of potting than the wheel for which I previously had an undue bias. I use Macphersons Clay and his slab clay with only three basic glazes in different combinations, iron, papa and a tricky dolomite when I decorate. The papa glaze is papa 80 per cent, whiting 20 per cent, and you can't get cheaper than that. It has a wide firing range from dull olive green on the bottom shelf at 1220° to blue black gloss at 1280°. It has more colour in the oil kiln but is quite satisfactory in the school electric kiln and very reliable. Recently I have used North Taranaki iron sand sprinkled on the wet glaze.

In the last two years I have started as a hobby the propogation of rhododendrons and that might just be at the same stage as my pottery was 15 years ago. Who knows?

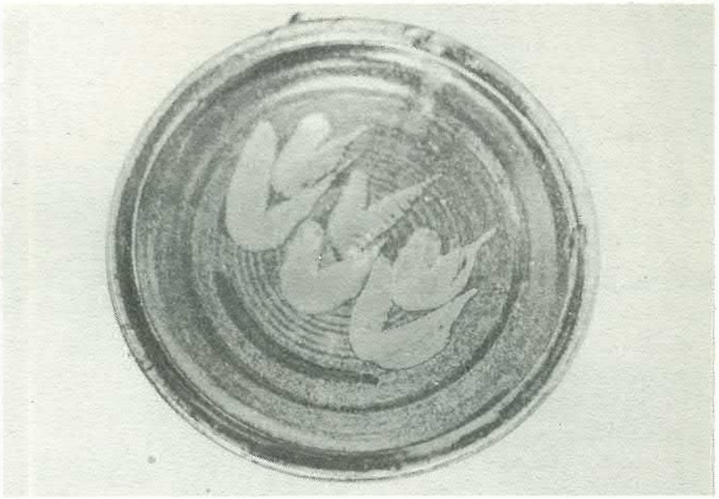


Plate 20 cm max. resist decoration on an iron wash and papa glaze.

Looking back over sixty years potting

Elizabeth Lissaman

I made my first pot and decorated it with birds coloured with raw earth shades in 1920. It was fired for me by a Wellington brickworks. I still have it.

As there was no opportunity to learn even the rudiments of pottery making in New Zealand, no materials and no books in our libraries, I went to Sydney and made copious notes. I also found out how to build a small coal-fired kiln which I fired with Westport coal. After hard work and many experiments I was able to make all my own glazes from imported materials. My first exhibition at long last was in Christchurch at the Winter Show in 1927.

Later I demonstrated potting in both Christchurch and Wellington as few people had seen a potter's wheel at work. I taught many including Elizabeth Matheson, who came and stayed in our country home for an intensive course, and later took adult classes in Levin and Morrinsville.

As I wanted to help others start potting I wrote "Pottery for Pleasure in Australia and New Zealand" published by Reeds in 1969. I hope this book has encouraged potters in using local clays and making their own glazes as it has been reprinted five times and published in America under the title "Starting in Ceramics".

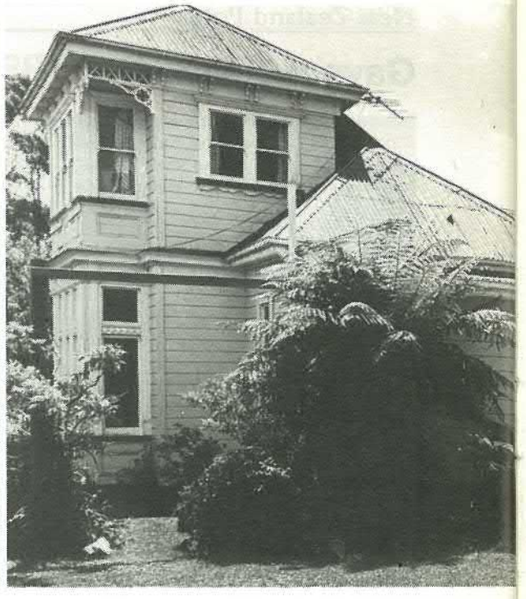
I seem to qualify for the title of "Grandmother" of potting in this country. I asked Briar Gardner some years ago if she was our first studio potter and she said "no", as she began the year I had my first exhibition in Christchurch.

I now live in Morrinsville near Hamilton and it is my wish to be of help to other potters if I can.

After using coal and wood to fire my kiln, I imported an oil burning one which was easier to use and now I have imported an electric kiln. I do not want to dwell on past difficulties as I feel one should always look ahead to new ideas and above all encourage the many wonderful young potters. The number of potters in this country and their appreciation and enthusiasm is amazing and long may it continue.

Good wishes to you all.

Elizabeth Lissaman
43 Canada Street
Morrinsville



Barry Ball

After learning to pot at Chelsea Pottery in England and working first at Briglin Pottery and then on his own account in London, Barry Ball returned to New Zealand in 1974 and established a pottery at Foxton.

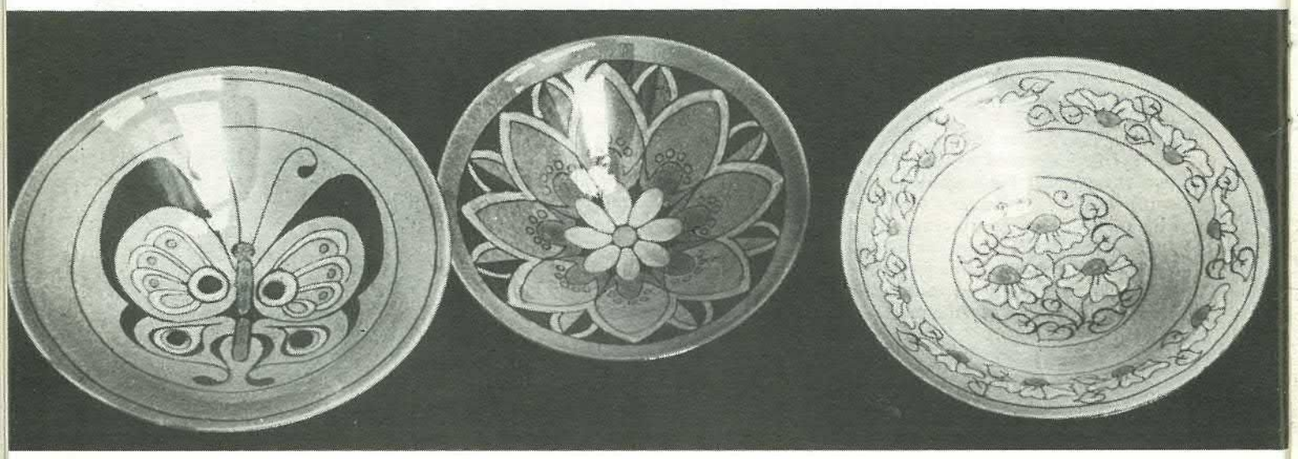
He moved to Te Kuiti in 1977. There with his wife Jane who handles the business and selling side, they have built up a large pottery workshop and showroom employing two full-time and two part-time workers.

Within the last two years he has completely changed his ware. Reduction fired stoneware has been replaced by decorated lower fired terra cotta. When working in England he observed a sgraffito technique in which a design is scratched through the glaze. The pots were then painted and sprayed with various glazes. For a year he experimented and refined this technique to produce an unusual effect. The demand for the ware is such that employment is provided for workers using their own designs to scratch and paint on to thrown bowls. One of the full-time workers is Hoa, a Vietnamese refugee. Although she had had no previous experience she has proved very skilled in painting.

The bowls are hand-thrown by Barry on an electric wheel and turned the following day. They are then bisque fired before the women scratch out their designs through a white glaze — after which they are painted. Various glazes and oxides are then applied giving the bowls their highly glazed finish. This process is time consuming and the thickness of the glaze application is all important. If too thick the glaze crawls and the sharpness of the sgraffito design is lost. Greens and blues have been the predominant colours used so far, but gold has just been added to the range. The backs of the bowls are sprayed with black to complete the glazing process. They are fired to 1030°C in an electric kiln using low night rate power (less than half the day rate). Successful designs are repeated, but designs are constantly changing and tests are regularly put through the kiln to keep interest keen.

Recently the sgraffito has been extended to decorating earthenware tiles and plates and other flat ware.

Having developed this side of the business Barry now has the freedom to concentrate on making some individual stoneware pieces, a pleasant change after many years of domestic production.



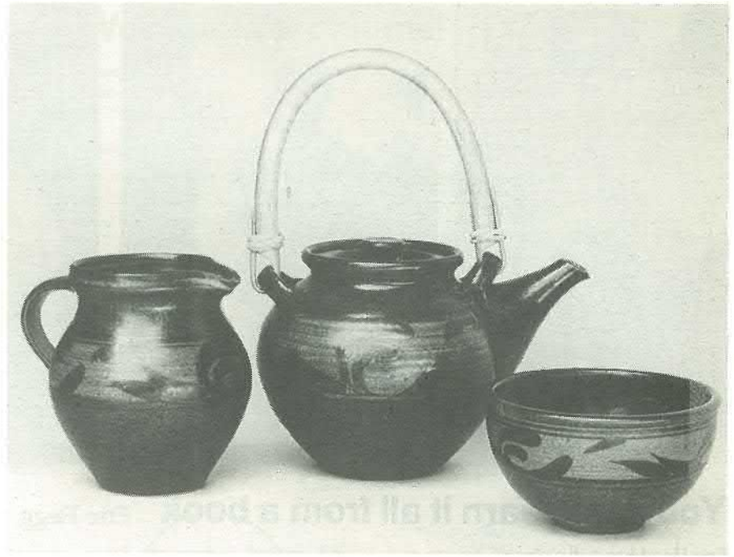
Val McArthur

I enjoy making domestic ware and fire a 4 cu. ft electric kiln to 1230°C–1250°C.

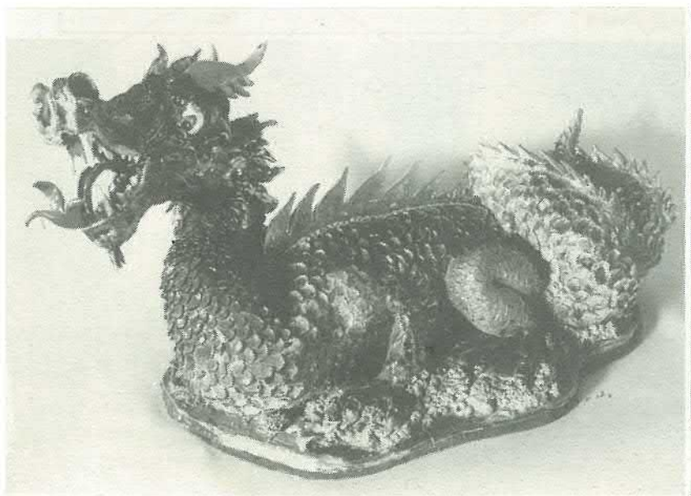
As I have not yet found a prepared clay body that fully vitrifies in oxidation at cone 7, I have developed my own. Basically this is a blend of stoneware, and earthenware clays and terracotta for colour. I have found that by blending different clays from different areas of N.Z. a more satisfactory result is obtained than by using say, just all Nelson clays. As each clay batch seems to be slightly different we keep a watch on its water tightness and fired colour and adjustments are made just by increasing or decreasing the proportions of stoneware to earthenware. Our current blend is:

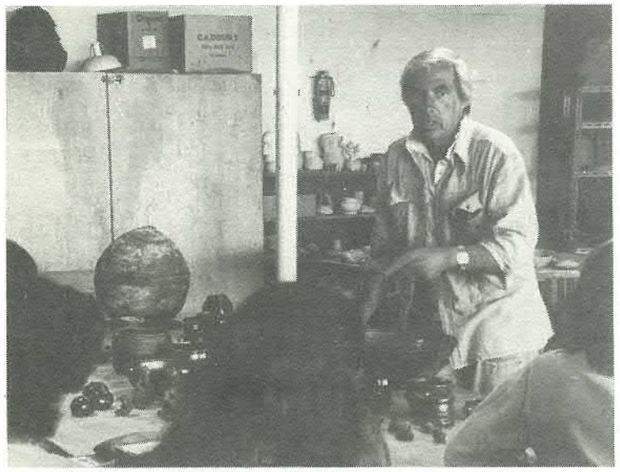
Ceraclay from Wellington (Screen Printing and Ceramic Supplies). Used to be known as Hume Clay.	5½ lb
A.F. 30 Fire Clay from Huntly (Powder — must be mixed with water and dried to plastic.)	5½ lb
RKF Nelson Clay	2½ lb
GB2 Nelson Clay	7½ lb

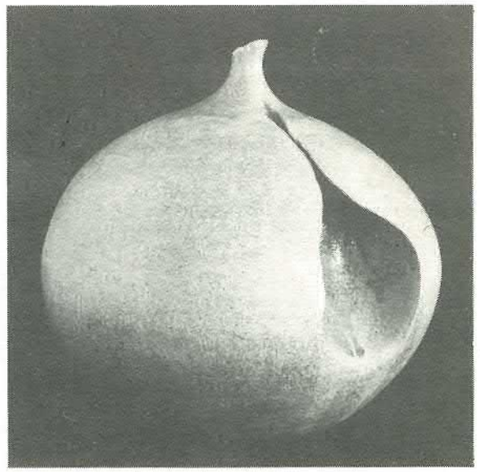
This has proved an extremely well behaved body for all thrown ware both large and small pieces and also small slab ware. As it is fully vitrified it is not good for things like large platters as they are apt to slump. The addition of more fire clay would possibly help here.



Upper right: teaset by Val McArthur brown matt satin glaze with slip pattern. Below left: dragon by Enid Lyons. Right: pots by Melis van der Sluis, satin red copper glaze 30 cm high, matt white dolomite 25 cm high, grogged unglazed clay 50 cm high.
photos: Alanna Cranston







Fissure pot 35 cm high stoneware, manganese glaze.
photos: Alanna Cranston

You can't learn it all from a book

Eric Flegg

Eric Flegg has a diploma of design and an art teacher's diploma from English Colleges. He joined the staff of Hamilton Teachers' College in 1968 where he is Head of Art.

A founder member of the Hamilton Potters Workshop and a tutor for the past ten years he has been influential on the Waikato potting scene. His pots reflect in texture and form an interest in New Zealand geology.

It is probably true to say that what is generally difficult to learn is relatively difficult to teach; few experienced potters would consider their basic learning as having been easy. The technology can be akin to an exact science, but processes requiring clay technique and critical judgement often present difficulties.

There is no simplistic formula for mastering a craft which demands the highly developed tactile sensitivity implicit in making good pots. No amount of demonstrating or discussing the "how" is sufficient to compensate for the teacher's inability to physically control the pupil's hands and fingertips.

Developing all the potter's skills is so much a self-discovering learning process and therefore highly egocentric, that out-going teaching methods are required. For example, it is less important for the teacher to be concerned with demonstrating personal skill and accomplishments than it is to build confidence in the pupil and to transmit the sensitive awareness one acquires as an "expert".

Furthermore studio pottery is one of those activities where there is now a close relationship between a well-documented and universally researched body of knowledge and an intuitive methodology. The proficient potter can fuse these influences and make a vital pot, while the learner — through anxiety to at least have a product to show — often finds it difficult to accept this fusion, preferring to go by the book. Encouragement of this acceptance is the area where the teacher's role is all important.

Elizabeth Woodfield

For eight years I have been a full-time potter making functional stoneware. I first exhibited with Auckland Studio Potters in 1971 the pots being functional stoneware fired in an excellent natural draught drip-fed kiln based on Patricia Perrin's kiln. This kiln fired to 1300°C in 6 hours. Being in the city it was usually fired at night. After moving to a semi-rural position I have a cleaner 60 cu. ft two chamber force fed kiln fired with 4 jet burners. I don't use cones or pyrometers preferring the excitement provided by judging with my own eyes. Sometimes I single fire, glazing pots when bone dry. After all this time I still get kiln fright with each firing. Ash papa rock and other materials I like to use in glazes need to be milled. This is the ball mill Gordon Robertson helped me build.

Elizabeth Woodfield's ball mill

The barrel rests on the rollers with the corked end away from the pulley. To keep the barrel off the drive pulley a block with a 4" bolt projecting is positioned at the centre of the roller mounting.

The stoneware barrel was found in a second hand dealers. It had no lid so a hole was bored through a tightly fitting cork and an eye-bolt inserted. To remove the cork after milling, use a rod through the eye-bolt to pull. Store the barrel without the lid otherwise the cork shrinks causing leakage.

The rollers and motor are from a washing machine. The motor is mounted on a slotted board so it can be drawn back to increase belt tension.

The pulley sizes are relevant to the diameter of the barrel and critical speed.

$$\text{critical speed} = \frac{54.18}{\sqrt{\text{R of mill in feet}}}$$

$$= \frac{54 \cdot 18}{\cdot 645} = 84$$

Optimum speed is between 64 per cent and 87 per cent of the critical speed. The considerable leeway is due to the differing viscosity of the material. Towards the upper limit the balls tend to ride the wall of the mill till approximately half way up, then are projected into the void above the general mass and come crashing down with considerable force — thus achieving the greatest impact. For further reference, *Pottery in Australia, Vol. 15/1*, page 23.

Using 2" diameter rollers and 6" pulley on the end thereof the size pulley on the motor was figured this way:

$$\frac{\text{circumference barrel}}{\text{circumference roller}} = 5$$

optimum speed (87% of C.S.) × 5 = 370 = speed by 6" pulley

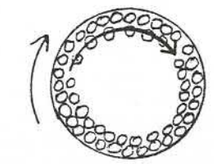
$$\frac{\text{r.p.m. motor (1440)}}{370} = 3.89$$

$$\frac{\text{circumference 6" pulley}}{3 \cdot 89} = 4.84$$

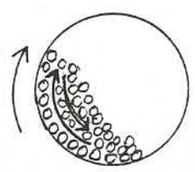
= circumference of motor pulley

diameter motor pulley = 1·5"

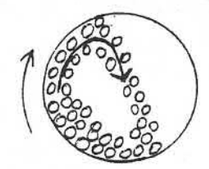
The 2" V pulley caters for this size.



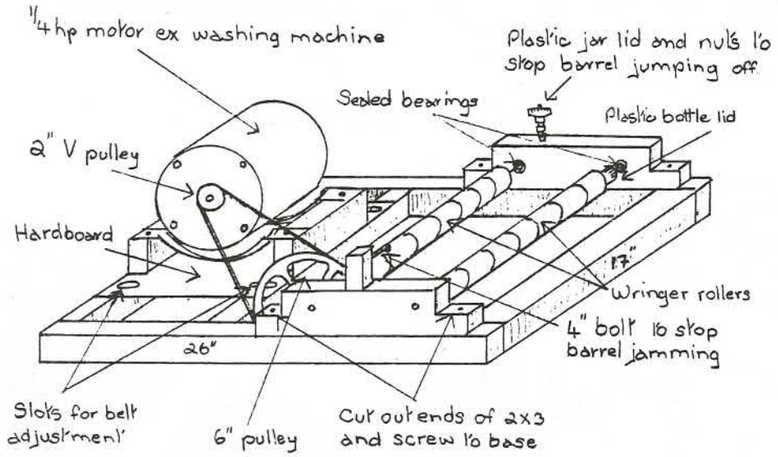
Barrel rotation too fast

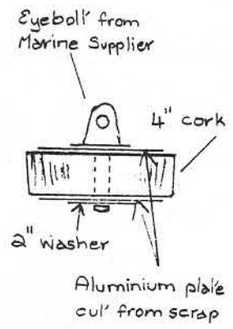


too slow



Ball action at optimum speed





Barrel size is 11½" x 10" diameter

Classes available

For beginner potters there are a number of High Schools offering night classes. Information from Public Relations Office.

Waikato Technical Institute: Tutor Don Thornley. Part-time day classes for beginners to advanced. Evening classes available also.

Hamilton Potters Workshop: Tutor Eric Flegg. Held in pottery room, Teachers' College. Workshop meets regularly. Contact Secretary, 17 Ann Street, Hamilton.

Waikato Society of Potters: Week-end schools held throughout the year with well known potters. A crafts centre/workshop will be established this year. Information from the Society's Treasurer at PO Box 9299, Hamilton North.

Waikato Art Museum

The museum actively promotes ceramics. Our collection was begun in 1973: we must acknowledge that it suffers from gaping holes — potters who should be included are not to be found and some others are represented by undistinguished works. However, it forms the basis of a good collection on which to build.

Sue Knowles collected and co-ordinated the notes and articles on behalf of the potters of Waikato. Alanna Cranston took the photos.

MEDIA

Conical forms by John Parker. *photo: Ans Westra*

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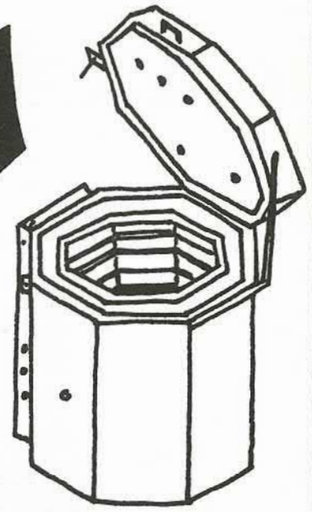

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Cobcraft

POTTERS SUPPLIES LTD.

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12 Potters

Auckland's first potters' co-operative

575 Remuera Road in the Upland Village Shopping Centre
Telephone: 503-590

HOURS:

Monday to Thursday	9.30-5.30
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SHIMPO
Potter's Wheels

RK-2 Wheel

More than 100,000 potter's from students, amateurs to professionals have used the RK-2.
The combination of its utility and workmanship gives perfect satisfaction to the professionals in pursuing their art.

RK-8 New Wheel

Younger sister of the RK-2 Designed with a new Ring Cone mechanism

Motor : 200W 230V AC, Single phase
Wheel head : 0 - 200 rpm
Wheel head turns freely while motor is off.

SPECIFICATIONS

Motor	200W (1/4HP) 50Hz. Standard: : 230V AC, Single phase or 400V AC, Three phase
Wheel head speed (Variable speed)	50Hz : 0 – 200 rpm Speed changes by foot pedal or lever operation.
Direction	Clockwise and counter-clockwise by selecting switch FWD or REV.
Wheel head	300mm (12") dia. Light alloy casting
Dimensions	Length 610 mm (24") Width 540 mm (21") Height 500 mm (19-1/2")
Weight Shipping weight	Net 39 Kgs. (86 lbs.) Gross 51Kgs. (114 lbs.)
Accessories	Plastic splash pan (Removable)

PUGMILLS

The body casing, augers, plates, and all other parts, are removable for easy cleaning. Safety tamper is attached.

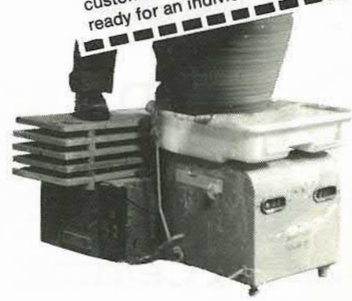
• Safety tamper is not available with NVA-15.

We request distributors in New Zealand who can directly import wheels from Japan, sell from stocks, and are in a good position of offering service to all customers in New Zealand. We are ready for an individual negotiation.

Standard Pugmills (NRA)
The most compact unit with the largest pugging capacity.

De-Airing Pugmills (NVA)
The highest de-airing capacity can be obtained.

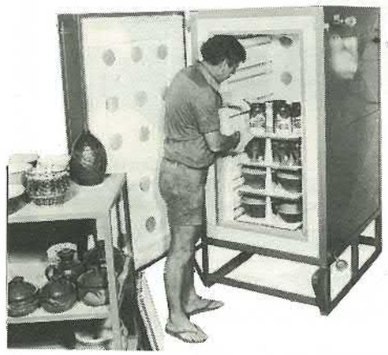
Model	NRA - 03	NRA - 07	NVA - 07	NVA - 15
Motor	250W	750W	750W + 100W	1500W + 200W
Capacity	280 kg/hr.	800 kg/hr.	400 kg/hr.	700 kg/hr.

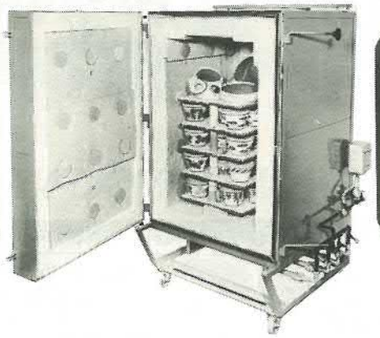


SHIMPO INDUSTRIAL CO.,LTD.

338 Tonoshiro-cho, kuze, Minami-ku, Kyoto, Japan
Phone: 075-921-7151 Telex: 5429 903 SHIMPO J

F.E. KILNS



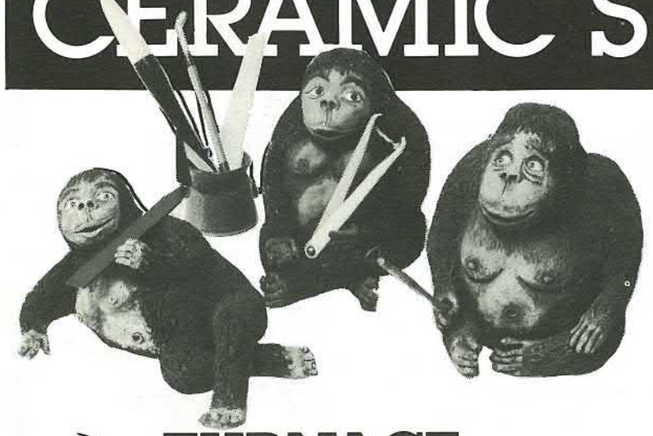


F.E. FIBRE ELECTRIC KILN.
Sizes from 2 cu. ft. — 30 cu. ft. Fire up to 6 cu. ft. on single phase. Low element wall watt density ensures maximum element life.

F.E. GAS KILN.
6" fibre wall for best insulation. The well known F.E. gas kiln is available in sizes from 5-60 cu. ft.

F.E. KILNTROLLER
All new digital controller automatically controls temperature increase, maximum temperature & soak times.

CERAMIC SUPPLIES



Clays — Glazes — Materials — Tools — Brushes — Equipment — Moulds — Books — Wheel Hire — Fireing Service, and many more useful treasures for potters. Send for catalogue. We invite you when in Auckland to visit the "Best In The West". The one stop pottery supply shop that has everything a potter requires and more besides. Have a cup of coffee and a chat or browse through the latest local and overseas potting magazines.

We will make your orders up while you wait or you may prefer us to arrange delivery.

Our team of experts want to help you with your pottery problems.

FURNACE ENGINEERING LIMITED
& Ceramic Supply Co.

10 WARD ST. NEW LYNN, P.O. BOX 15293 AUCKLAND 7 NEW ZEALAND. PH 873-604

THE NEW TALISMAN CADET ELECTRONIC WHEEL

This new addition to the Talisman range is for people who need to pot in restricted spaces and who don't aspire to throwing extra large pots. Designed to throw up to 6kg of clay, our picture shows that in experienced hands, the Cadet is still capable of much more than this. Peter Collis, Talisman's resident potter, is throwing a tall bottle made in three separate lifts. The Cadet is ideal for schools too. Pupils can stand to work at an existing bench, taking up little space and needing a minimum of special equipment.

Write for a descriptive leaflet.

THE TALISMAN SIEVE

Many thousands of Talisman glaze sieves are in use throughout New Zealand, Australia and many other parts of the world.

Our sieve may have been imitated but it has never been quite equalled, with its all-aluminium construction, its three-point frame mounting, its exclusive moulded and securely fastened shaft bush, and its three nylon brushes mounted in a moulded plastic holder which, though very strong, is flexible enough to ensure that the brushes maintain contact with the gauze screens even if these become rounded from long use.

The interchangeable stainless steel, rubber-rimmed screens also fit the Talisman hand sieve.

TALISMAN

Talisman Potters Supplies Ltd, 171 Archers Rd, Takapuna, Auckland P.O. Box 36074, Northcote, Ph 480-735.

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★ VENCO WHEELS
★ AGENT FOR GAS AND ELECTRIC KILNS

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THURSDAY 1 PM — 5 PM
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Central Ceramics

89 NORTH STREET
BOX 345
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PHONE 36827

New Zealand Craftworks

You saw Vaughan and Campbell helping to clean conduit for the lights in Spectrum—those lights turned up the other way are now used for display in *NEW ZEALAND CRAFTWORKS.*

Yes, a name change and location change. Photo right shows some of Dianne White's gentle and beautiful works. Featured below you can see pottery from Sally Vinson, Graeme Baskiville-Robinson, Ann Ambler, Lawrence Ewing and Paul Tobin.

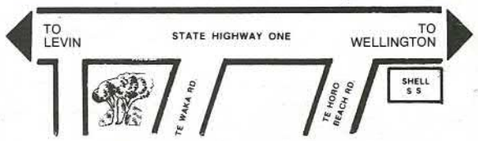
Bottle walls with flagon windows make a good backdrop for pottery.

Through the window is an area to be developed for ferns, herbs and outdoor pottery.

•

To find us, look for the *NEW ZEALAND CRAFTWORKS* signs, the N.Z. Ensign and our craft flag on State Highway One.

Please drive in.



New Zealand Craftworks

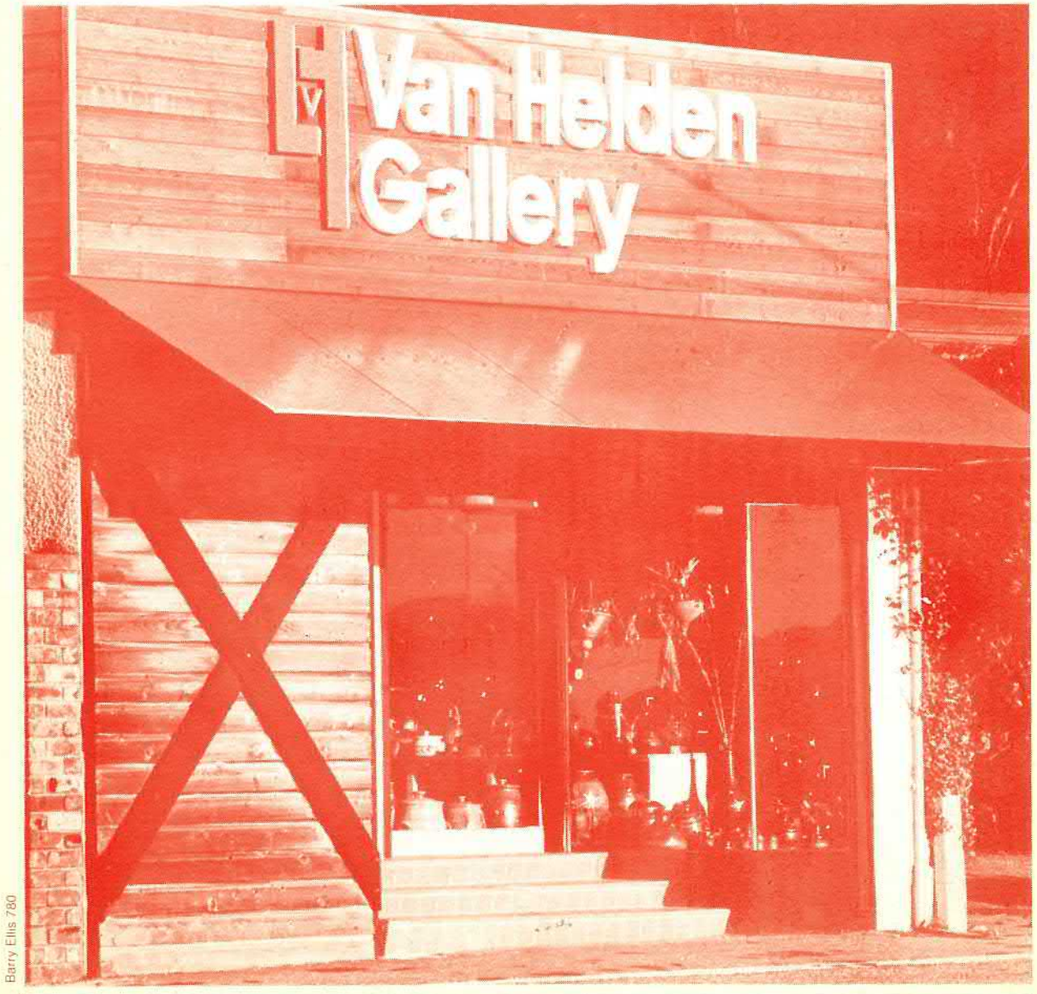
P.O. Box 68
Te Horo
Phone Otaki 43175

Tuesday-Sunday and public holidays 10.00 am-5.00 pm

The Gallery By The Sea..

Across the road from Days Bay beach you will find our "Gallery by the sea." We pride ourselves that our collection of pottery, prints and weaving is among the finest quality craftwork in New Zealand. Walk along the beach, enjoy the harbour view then pop in and see us – we are open 7 days a week.

Van Helden Gallery
P.O. Box 41-031
Eastbourne
Telephone 628-191



Barry Ellis 780