

Screening in Japan

Fluent in Japanese, **Des King** studied the art of shoji making in Japan.

Photo: Rebecca Nathan

In early 2006 my wife Mariko and I decided we needed a change. For almost 20 years we had worked as freelance Japanese-English translators, and we were looking to end the long hours hunched over a computer. Woodworking had been hobby for many years, and I began seriously contemplating it as a full-time occupation.

After studying, living and working in Japan it seemed only natural that my woodworking career should have some connection with Japanese culture. An in-

ternet search led me to Shokugei Gakuin (International College of Craft and Arts—ICCA) in Toyama, a very picturesque prefecture on the Japan Sea side of Japan's main island Honshu.

The college was founded in 1996 with the aim of fostering young professionals in carpentry, furniture making, *tategu* (making and fitting shoji), and landscape gardening. The setting is ideal amid the natural beauty at the foot of the Tateyama mountains, and natural wildlife—monkeys, deer and *tanuki* (Japanese

raccoon dog) and more—are regular visitors. The college programme and philosophy seemed to have everything I needed so in early 2008 we left the warmth of the Gold Coast and headed for the deep snow of winter in Toyama.

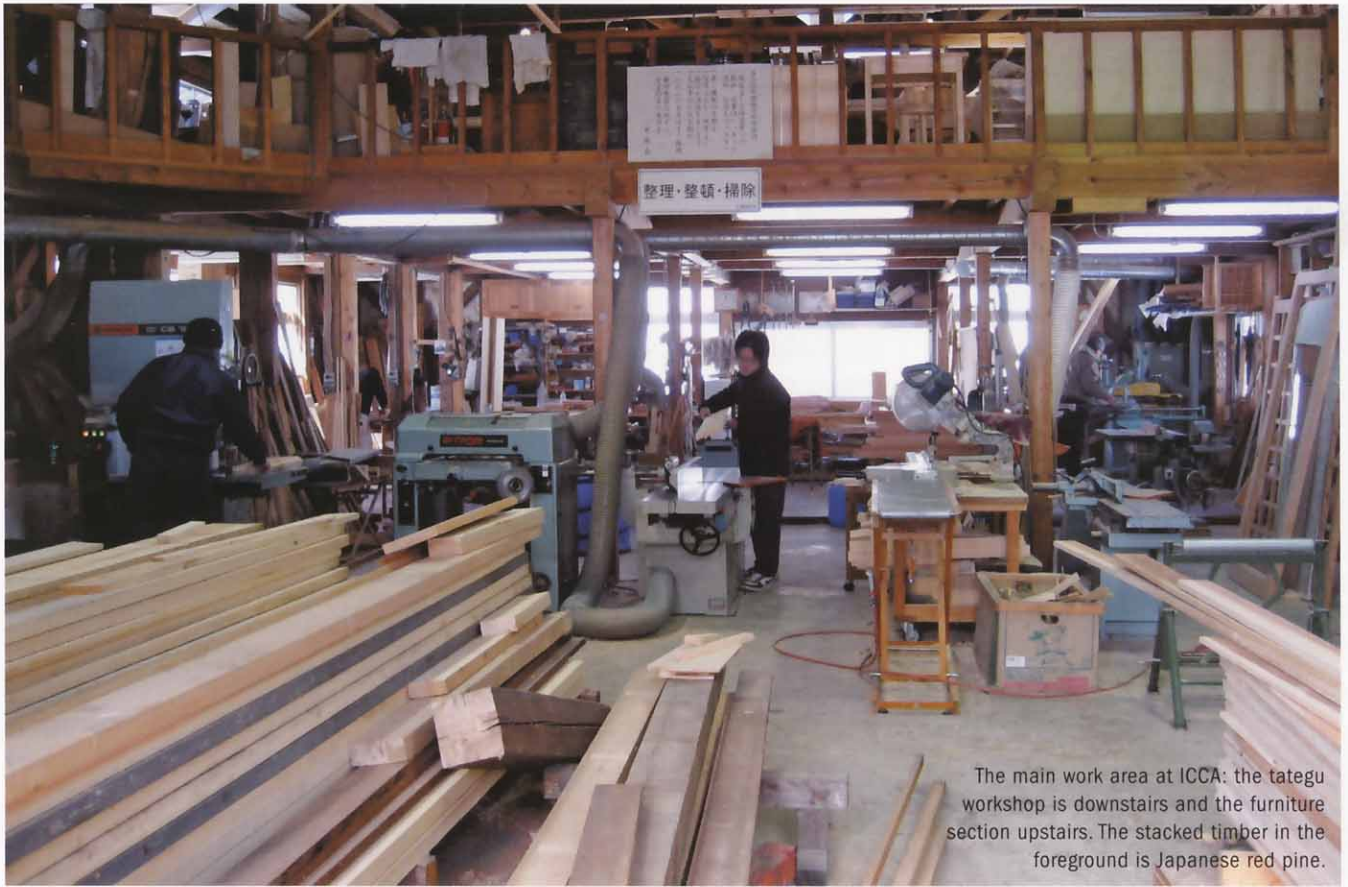
A learning experience

The spirit of the *shokunin* (craftsman) is central to the teaching philosophy, and traditional hand skills and methods are at the heart of all practical training. The college also takes on commissioned work for the local community. Students carry out this work under the supervision of their instructors, so in this sense it is very similar to an apprentice system. Graduates are very highly regarded by the industry, and the graduate employment rate is close to 100%.

A two-year course is designed for students with little or no experience. Early practical work consists of tool use and care under the watchful eye of the senior master carpenter. Here students are first exposed to the traditions and obligations of the *shokunin*. After six months, students gradually have more practical contact with their respective disciplines. Based on my past woodworking experience, I was placed directly into the one-year postgraduate course which is entirely practical work. I had to become proficient in the basics of *tategu* to meet the needs of the college's commissioned work. I was the first foreigner to study full time at ICCA.

The first week was spent tuning tools, and then using Japanese saws and planes properly was the first set of skills to learn. I received considerable corrective action on my hand, arm, hip, leg and body position for both sawing and planing from my instructor, Sawada Sensei, a highly skilled second generation *tategu* *shokunin*. Finally I started to get my saws and planes moving in generally the right direction.

My first project was a simple glass window frame with straightforward joinery. From this beginning, the glass windows became progressively more complex. I also had to learn how to cut and fit the glass, and spilt more than a few drops of blood in the process. It took a lot of practice before I was finally ready to make my first shoji model, a simple lattice pattern.



The main work area at ICCA: the tategu workshop is downstairs and the furniture section upstairs. The stacked timber in the foreground is Japanese red pine.

External work

Field trips were an important part of the course and included visits to various factories, timber yards, gardening centres and forests to learn how wood is processed from trees to kiln dried timber, and the various uses of the timber products. Trips to important heritage sites also gave insight into Japanese architectural traditions that in some cases date back more than a thousand years.

The external commission work added a real world aspect to our training, teaching students how to conduct themselves on a job site. They are expected to adhere to the shokunin principles drummed into them from day one.

I was fortunate to be involved in work at two old temples, a local hall, the neighbouring university, and several building restorations, as well as minor work in a couple of private residences. The work in the temples was the most interesting and rewarding. Both were undergoing extensive renovation work, so I had access to temple areas that most Japanese would never have the chance to see or experience. Moreover, because of their age and the many earthquakes over the years, most of the door and window frames



Above: Morning tea during work on one of the temples. **Below:** Temple storage shed built by the students—the author made and fitted the front bamboo doors.

were so far out of square that adjustments of some of the sliding shoji and windows required considerable lateral thinking. This was a tremendous learning experience.

Graduation display

The graduation display was the culmination of the year's work. Students are



required to complete a display piece, and give a detailed explanation of their work. I displayed and described the two pieces I had made, and this seemed to go across quite well. To me though, the highlight of the display was the scale model of a two-storey traditional house built using only traditional joinery by one of the postgraduate carpentry students. More than anything, his work articulated the goals and purpose of the college perfectly.

Journey's end

Professionally the course was everything I had hoped it would be. To be trained by and associate with top shokunin is an experience that is bearing more fruit with every passing day. But more importantly, what I gained from them goes well beyond mere planes, saws and chisels. They taught me what it means to be a shokunin, and the worth and significance of that spirit.

On a personal level I met some very talented craftspeople and made many wonderful friendships that will be renewed regularly. The tategu section worked closely with the furniture section, and I quickly came to the realisation that while external physical features and language may be different, the frustration of misbehaving timber and joints that don't quite fit, and the joy and satisfaction of completing a piece where everything comes together just right is truly universal.

Next issue Des will demonstrate how to make a kasumi kumiko.

Des King studied Japanese before graduating from officer cadet school with a commission in the Australian Army in 1976. He left the army and now makes shoji full time from his Gold Coast, Qld, factory. Contact Des via email: dmking1@mac.com



Sawada Sensei



What are shoji?

Shoji are translucent paper-backed doors, windows and room dividers. They evolved into their present style around the mid-11th century. The paper backing fills a room with a soft and gentle light, while the play of light and shadow on the paper introduces an element of ambiguity—things can be seen, but not seen.

Shoji have a main frame, an often thinner internal frame (*tsukeko*), and a lattice of thin strips of timber (*kumiko*). Special shoji paper is fixed to the *kumiko* with starch glue. Rebates at the top and bottom allow the frames to slide in grooves along upper and lower tracks. Provided certain 'rules' are followed shoji design can vary from simple vertical and horizontal lattice, to patterns and landscape scenes that are breathtaking in their complexity and detail.

Kumiko are joined together with a series of half-lap joints. The fit of these joints is critical—too loose and there are untidy and unacceptable gaps, too tight and the *kumiko* will bow upwards or split.

Des King's shoji screen won an Aquisitive Award in AWR's Studio Furniture 2010 competition.

Asa-no-ha (hemp), goma (sesame), and sakura (cherry blossom) patterns combine to represent Mt Fuji. There are over 2000 hand cut and planed *kumiko* pieces—smallest less than 5mm long, and the thinnest 1.1mm. Minimal amounts of glue are used in assembly.

Kumiko

All tategu shokunin can make some of the intricate kumiko patterns, but those who take this to a new level are known as kumiko shokunin. Theirs is a world where the pieces that make up a set of shoji doors can number in the tens of thousands, and a world of secrecy where new techniques are jealously guarded and passed down only within the family or the business. Over time I began to notice the various kumiko patterns in a different light, and the future direction of my training and studies started to take shape in my mind.

KASUMI Once my simple shoji received the nod of approval from Sawada Sensei, I added a few simple design features. First was the *kasumi* (mist) pattern, a basic lattice with shorter and thinner horizontal kumiko to represent a light mist*.

KOUZU From the kasumi, I moved on to the *kouzu* (illustration of fragrances) pattern. The critical part of this pattern is the 45° mitre joint on all joining kumiko, and accuracy and the correct amount of connecting tension is essential. If either is slightly off, the mitre will not join tightly, resulting in unsightly gaps, and frowns of disapproval from Sawada Sensei. With each trial piece, I increased the complexity of the *kouzu*.

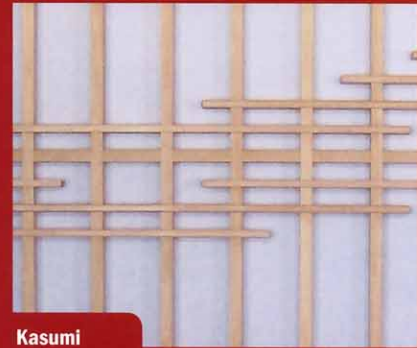
ASA-NO-HA Next was the fundamental pattern in the floral designs—the *asa-no-ha* (hemp leaf). This consists of a square containing a diagonal piece, a hinge piece, and a locking piece. Here too lengths and angles are critical. The hinge piece is cut at the centre with a saw to a depth so that only about the thickness of a piece of paper is left, and the locking piece is inserted into this to hold it all in place securely. I found the easiest and quickest way of cutting the hinge piece was simply to judge the cut by eye, using light and shadow.

BENT KOUZU This covered everything that I had hoped to tackle with the vertical and horizontal kumiko patterns, but before I moved on to the next challenge, I wanted to try something that I had seen in a very old display piece at the college—the bent *kouzu*. The bend is achieved by a series of saw cuts in the kumiko. To describe the calculations required for this would take up an entire article in itself, but suffice to say, accuracy in half-lap placement, and kerf depth and interval is critical. Somehow it all came together for me quite well, and I even received the slightest nod of approval from Sawada Sensei. I had the use of a CAD program to help me with the various calculations, so my respect for the skills of the pre-computer shokunin increased enormously.

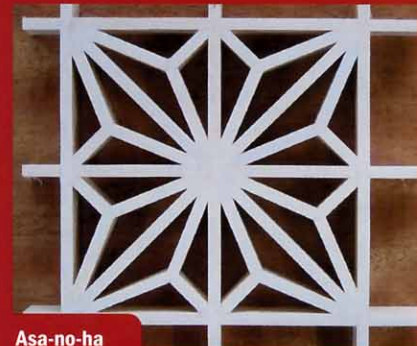
HISHI-GATA Diagonal patterns form the basis of the more complex kumiko designs. Diamond shapes are obtained by cutting half-lap joints in the kumiko at specific angles, depending on the size of the shoji, the number of diamonds and the desired effect. The regular diamond forms the basis of many of the other more complex patterns. After a couple of false starts I successfully completed a single diamond pattern, then as an additional challenge, a double diamond. From this, with different kumiko thicknesses or lengths, a range of very interesting patterns becomes possible. I now had enough skills to build the first of my pieces for the college graduation display—shoji with *asa-no-ha*, and a *ranma* (transom window) with diamonds and *asa-no-ha*.

MITTSU-KUDE The diamond is only the foundation to the pattern that is central to much of the truly advanced kumiko work—the *mittsu-kude* or three-way joint. This is perhaps the most critical and difficult pattern, because if the cuts are not exact, the pattern will not come together properly. Three kumiko are cut in different ways, and if all cuts are accurate, the joint will slide together, resulting in exact equilateral triangles that can house the various kumiko designs.

Largely because of the tens of thousands of saw cuts, both practice and in making pieces, my first effort at the three-way joint came together quite well. Christmas and the New Year had passed, and with snow building up all around, I now had the confidence to test myself on my second, and main graduation piece—a *ranma* with an *asa-no-ha* and sesame combination. Three weeks later, and two weeks before the graduation display weekend, I completed the *ranma* and earned a nod, and a smile, from Sawada Sensei.



Kasumi



Asa-no-ha



Bent kouzu



Hishi-gata



Mittsu-kude