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Knotting Matters

Newsletter of the



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Knotting Matters

**Newsletter of the
International Guild of
Knot Tyers**

Issue No. 75

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Cover design by Stuart Grainger



*Read how the Guild helped the
archeologists in Chariot Queen*

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Notes from the Secretary's Blotter

The seasons move on, and for the first time this year, that big orange ball has appeared in the sky over Great Britain. Unfortunately, when it first arrived, I was on holiday in France, some 500 miles, or even 800 km nearer to the equator, and what do we get, yes two weeks of continuous rain!

From that, you can gather that the wretched fellow was on holiday again. There is no wonder that his telephone is never answered, and replies to letters are a long time coming. Certainly, over the last three months life has been quite hectic, what with work commitments which took me out of circulation for two months, and gradually clearing up all the family problems, the routine work has had to take second place. The good news is that I am now back in harness and I am slowly catching up on the backlog.

Despite my low profile over the past few months, I can confirm that we have now taken large steps forward in becoming a much more professionally managed organisation. This will no doubt result in a loss of some of the Guild's natural friendliness, but unfortunately that is the price we must pay to ensure a sound future. I am sure that it will be just a question of time before the girls at the CAF will get to know you just as I have.

CAF are now collecting your subscriptions on my behalf, which has certainly eased my workload. I would encourage you all to use the service they are providing, firstly because it would help me, and secondly because we are paying for it. They are much more businesslike than I am, and as they say at CAF, they do like to see everything tied up correctly. In particular, they would remind your cheque should still be made out to IGKT, and please include your

name and address in your letter. If you are paying by credit card, then they would ask that you indicate which fee you want them to collect, as at this stage, they do not know whether you are a junior, adult, family or group member. Should you wish to contact them, Linda Easton is our contact, and her phone number is 01732 520040 and her email address is leaston@cafonline.org

Finally, for those overseas members who have may have problems in obtaining cheques or cash in UK pounds, I will try to be as flexible as I can be. Just let me know if you are having trouble, and I will see what I can do to help you, - but please don't send non UK currencies to CAF as they are not permitted to deal with it.

At this moment we are all working hard to get ready for the AGM, however I have recently been distracted from my duties, by numerous requests from my colleagues, for a piece of string to hang their identity card around their neck. This is because my employer, who insists that this should always being worn, and provide a small chain for the purpose. Several people have casually tossed their chain onto the dash-board of their car when they left to go home, only to watch it slowly disappear down some inconvenient orifice, and in some instances this has caused a fire.

Naturally, I have made my own necklace from a piece of pink fluorescent string, with a suitably attractive knot to enhance its appearance. The effect is quite noticeable, and as a result I have numerous requests from young ladies for such an adornment. So if you spot a young lady wandering around the south of England with a piece of fancy string around her neck . . .

Nigel Harding

Col's Comment

During February this year, BBC television screened a programme called *Meet the Ancestors*. This popular archaeological programme enlisted the help of the Guild to provide a knot tyer to make lashings on a recreated iron age chariot. Richard Hopkins from the West Country Knotters stepped in to provide the skills required. You may read of his experiences in *Chariot Queen*. More importantly, the International Guild of Knot Tyers is more and more being recognised as an authority in the field of knots and ropework.

Speaking of television programmes, I commented in the last issue of KM whether we would get any new members as a result of the programme *Have I Got News For You*. Knotting Matters was featured on this satirical programme as their guest publication back in December. Well at least one new member has joined us after seeing the programme, he is Ken Bird who has also joined his local branch, the West Country Knotters.

As one thought leads to another, I recently spent an enjoyable afternoon with the West Country branch at their AGM. It was great to see such a good turnout and I was made most welcome. While I was there, it was brought to my attention that a photograph appeared in the Knot Gallery of KM 69 featuring a pair of macrame belts. These should

have been attributed to the work of Bernard (Jumper) Collins. Better late than never, I apologise for this omission.

For those who correspond by email, please note a change of address. The Email address for Knotting Matters is now "knotting_matters@btinternet.com" without the quotes.

This issue of Knotting Matters will have gone to press well before the Guild's 20th birthday celebrations. Like many of you, I am looking forward to this milestone in the Guild's history. It will be both a time for looking back and also one for looking forward. There has been an exceptional amount of work put in behind the scenes to make this celebration a truly memorable occasion. I am sure it will have been a successful week and a fitting end to Ken Yalden's tenure as Chairman of the Guild Council. Ken has worked tirelessly over many years with the Guild Council, ensuring that meetings start (and finish) promptly, maintaining order and keeping us on the subject in hand. I'm sure you will all join me in wishing him a happy retirement from the post. Thank you Ken, for all you have done for the Guild.

OBITUARY

It is with regret that we have to record the death of Bill Lyden.

Bill was a member of the West Midlands Branch, and died of a heart attack in March this year. Our condolences go to his family

The Ropemaker's Arms

by Richard Hopkins

Earlier this year I visited Bridport and took photos of the two sides of the sign outside the public house called "The Ropemakers".

I noticed that the side showing the two men working shows them to be clean shaven, and wondered if this might be a warning for Charlie Smith to make sure his beard does not become trapped in the gears.

I believe that the heraldic sign has been mentioned before in KM but do not think the other side of the sign has been shown.



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Just Doodling!

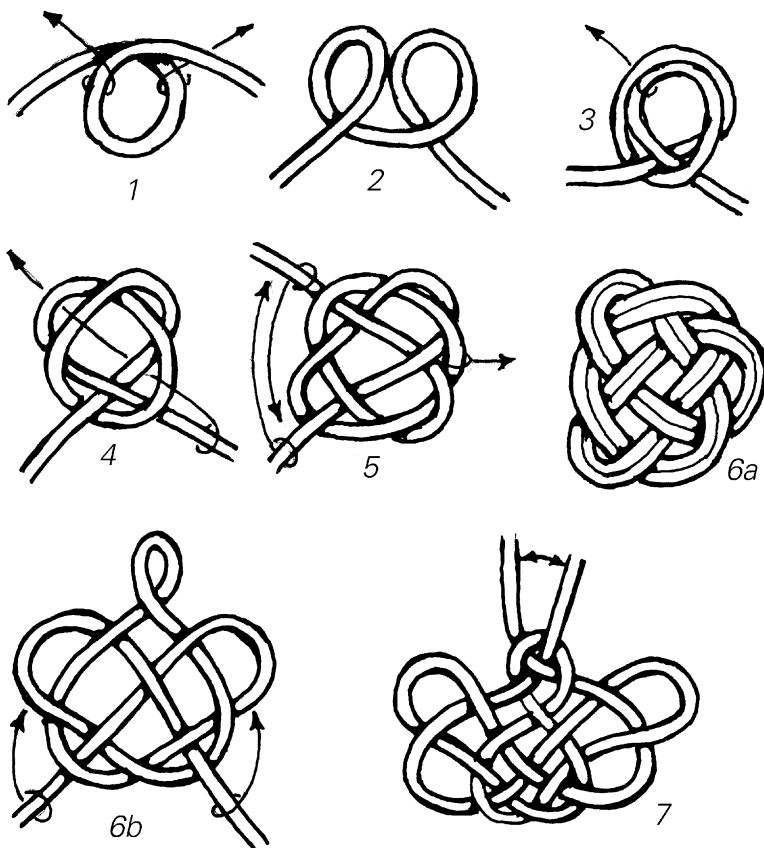
by Ken Higgs

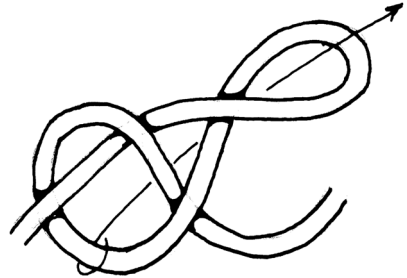
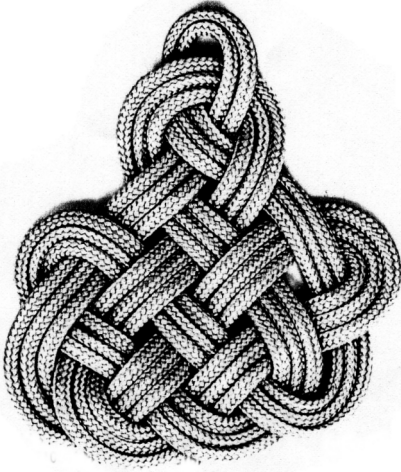
A simple breastplate, a butterfly or the leather bottle from a plain loop.

From 1 pull the two bights apart to form 2, then cross the bights back to form the clove hitch (3). Tuck one loop through the other (4) and lock with one end (5) From this, either marry the two

ends to make 6a or reform the loops and twist the bight to make 6b, and lock with both ends.

By marrying the ends again, Brian Field's 'Leather Bottle' pendant is formed.



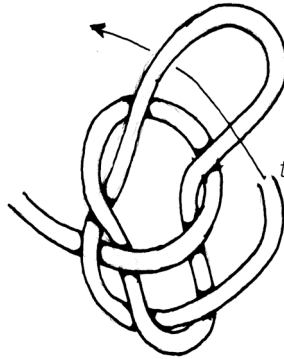


Tuck this bight

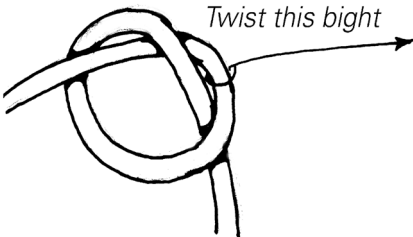
From simple beginnings.

Start with an overhand knot. One of my first tasks as a Cub Scout was to make my own woggle from a leather boot lace. This was the first method - many others were to follow - I learned of making a 3L x 4B Turk's head. The drawing should be enough.

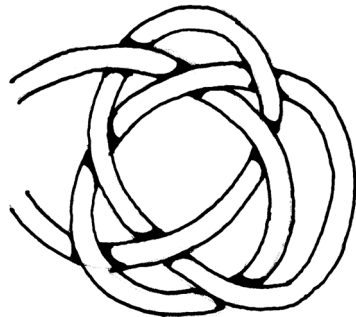
Enjoy your doodle!



Pass this end through to lock



Twist this bight



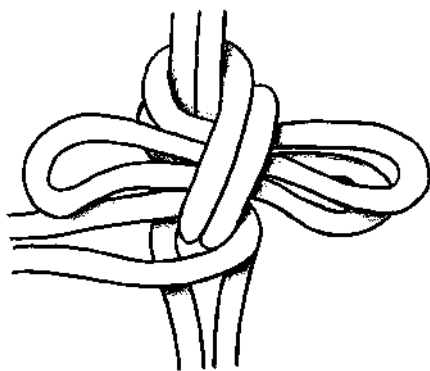
Something New?

by Damir Visic

Sometime in the summer of 1999 I had to transport my son's boat, an Optimist class on a roof carrier placed on my car, but these carriers were too short. I didn't have enough time to get new carriers, so I had to improvise using what I had - two wooden laths and few short pieces of rope. This knot came as a result of this improvisation. After I finished working, I realised that I had never seen this knot, neither in my sailing practice, nor in literature.

By contacting Gordon Perry I tried to find out can this really be a new knot? Because of some technical problems we couldn't come upon any kind of solution. Later, I wrote to Nigel Harding, who transferred my request to Geoffrey Budworth. He did some research and wrote back that this knot is familiar to him as the one described in the *Ashley Book of Knots* (#2064), however they are only partly similar. Also, he directed me how to make a presentation of my knot, i.e. which questions should be answered, and suggested that publishing in *Knotting Matters* is the fastest and the most complete way of presentation of a new knot. By his opinion, there are two basic issues any new knot should meet - "So what" and "Who really cares", meaning, why is that allegedly new knot is better than another previously known knot for the same purpose.

In these days, with contemporary technology and materials it is maybe even an illusion to say why any knot should be irreplaceable. Except among a small population interested in this field, in practice only few basic knots are used. Still, knowing knots and the essence of a particular knot allows quality improvisations in replacing parts of equipment, or in better usage of the equipment. Therefore, I believe that every knot requires full attention, especially if there is a possibility that a

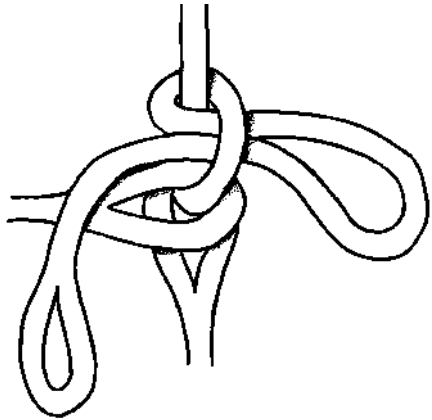


new knot has been invented. The knot I am talking about here is still nameless, because I don't really know if it is really a new knot. It can be easiest described as a sequence of several strap hitches, connected in a way that every one of them serves to pull the previous one tight. It is very simple to tie, and even

simpler to tie it off. Some of possible uses are shown on attached sketches. They could be used in several different versions, either with strings or with short ropes ended with eye splice or bowline. Advantage over knots with the same use through connecting with a chain of knots, is that it can be tied with short ropes instead of frequent dragging of one long rope. Besides that, even some piece of rope left from some other situation can be used.

One of the Geoffrey Budworth's questions is whether this knot is been used and where. I can confirm that it is really the case. During the last few years I am writing articles about knots in *Slobodna Dalmacija*, a daily newspaper from Split, Croatia which brought me a reputation of someone who is at least close to be an expert on this matter. Thanks to that, I had been engaged in a project of a knot exhibition in Fishermen's Museum in town of Komiza. This is one of the most beautiful Croatian island of Vis. Also, after I had presented this knot in a sailing club where I am member, a lot of my friends have started to use it in everyday practice, especially in tying sails when not used.

On an attached sketch I didn't show an end of my knot, which can be done in a few different ways. The simplest is through tying a half hitch or a slipped half hitch with the last string in the sequence.



Dan Lehman of the IGKT New Knot Claims Accreditation Committee replies:

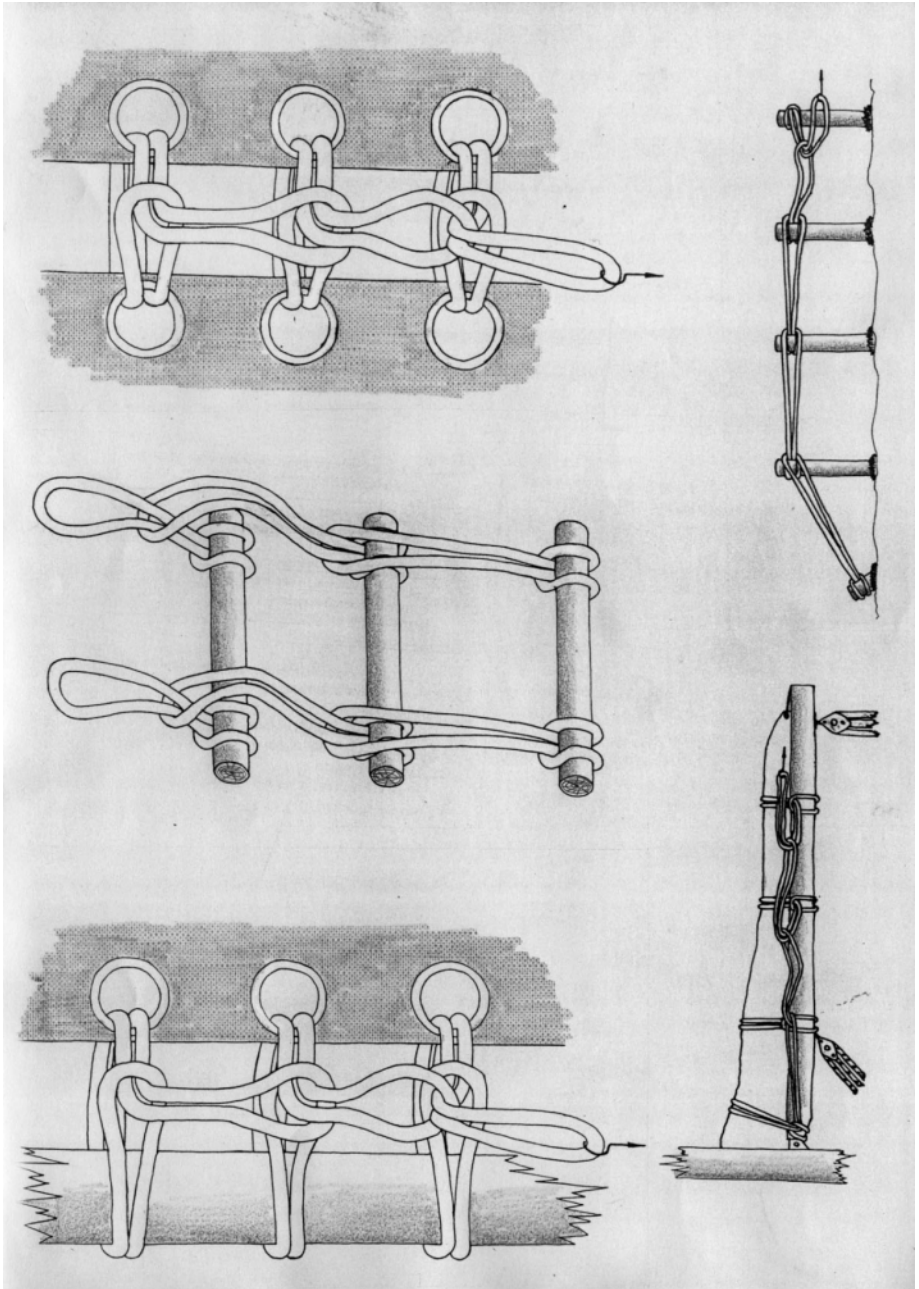
The prior submittal was of slings, here we see double eyes.

ABOK #2100 comes to mind, and using a long rope vs. a set of many just-the-right-size slings/double eyes sure seems more practical.

In the use shown, if one sling fails, then all to its left, which depend on it, will come apart. Same with one rope, but at least then one has just two, longish items to control, vs. an entire set of things. (I suppose one could rig the set such that each was secured (e.g., stoppers on either side of eyelet) to each eyelet, awaiting joining.

But the uses depicted with esp. the double eyes running vertically up a mast seem dubious also in terms of behavior: that there can be shifting of the orientation of each to others, and as one gains slack and feeds this to the next, the next then shifts and - not at all attractive (ignoring the difficulty of setting them up in the first place).

As the "knot" aspect of this goes, we see nothing new in it.



Creating an exhibition

by Jan C. Hoefnagel

In 1996 we got hold of an old sailing vessel called the *HOOP*, it was donated to the Maritiem Museum in 1975 and used then as a dumping barge which means a garbage collector. In 1995 it was neglected so much that management decided to sell it to the scrapyard. I was giving tying lessons since 1985 with the Museum, and looking for a better location as canteen and carpenter shop. The resident rigger who was a friend contacted me and suggested putting the wreck ashore and restoring it, which was granted on condition that there was no budget available to do the job. And on this we agreed not knowing in what mess we had maneuvered ourselves.

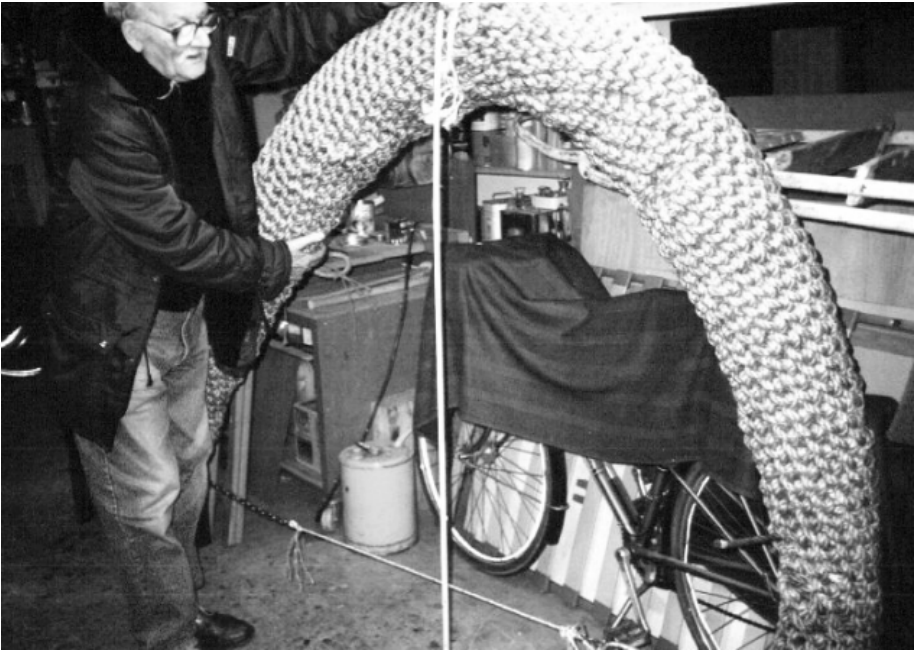
We started a begging campaign around firms in the harbour and collected at first the bottom planks, which were cut-up mooring poles, and were very hard in cutting to size. But we were glad to have them, since the existing ones were rotted away. Then we cleaned all the rubbish out of the hold, which resulted in a near escape of death by blood poisoning for my friend. There must have been some chemicals left in the bottom. After a stay in hospital he was welcomed back on board with a good dose of Schiedammer and on we went.

After a few months we laid the new floor and repainted the outside to hide

the rust and cracked decks. Members of the Guild helped out with jobs we could not do ourselves, also with the Museum there was enough knowledge available, like electricity and mounting the gadgets. Then we started to do the rigging, the cables were no problem but the 24-m mast was rotted away over 3m. We had to dig out the rotting wood and had a problem, how are we mending a mast having no money?

But as always salvation was near. A bucket of two component plastic was found and was mixed with catgrit, which we applied layer after layer in the hole and left to harden. After three weeks we





had a presentable mast again which was erected and left to stay upright and never to be lowered again. This is one of the things you can do, if a boat is standing on the shore. In the meantime I got tired of going to tying and boating fairs after ten years; with all the rigmarole involved, also the shed at home became too small. So my books and tools were moved in the *HOOP*, which was more convenient for teaching. We had now a dry and cosy spot in the Museum where we were left alone, until one of the benefactors noticed our heaven and became enthusiastic for there was not any rope working to be seen in the Rotterdam Museum and that they got for free, a Dutchmen's Godsend.

I already used the premises for meetings for the Guild once a month and that also for free on condition that we were to teach the Museum personal to

knot which we have done ever since including making of tugboats fenders and ropage for mooring the vessels. My brother Louis helped a lot until 1998 when he got a stroke and lost his ability using his hand, older members will remember him well

We were becoming a public attraction with always visitors around and keep the boat open three days a week and on any special day for the museum, also we are there the last Saturday in the month for the members. In it we have 15 displays of knots a variety of rope work, computers, library of 40 books, rope machines, an organ (playing) photographs and lots of nostalgic harbour attributes and the use of my four languages to give information to visiting foreigners. It is not a shining modern exhibition with all the trimmings, but a really working place, something visitors prefer. Dust and stray



bits belong to the reality of every day work.

We still give lessons to Marine students of which over 250 passed the exams during the last four years, it is only basics with a sprinkling of use and reckoning of forces used in lifting heavy loads, also reading gauges and depths of boats. It is all in a free atmosphere; there is only one snag, what becomes of the boat when we are not able anymore to keep it up. We are 71 and 77. But we shall let God's water run over God's acres. Wait and drink tea.

Details of the vessel:

Called a TJALK, (like a KEEL)
 26 metre by 4.50 by 1.90m depth
 Gross tonnage 98,905 ton type
 sailing barge
 Used for all available cargo and
 manned by family

Built in 1890 at Smilde for FL 2800
 guilders (BP 260)

Last owner M vd Bend 1901-1975
 (born on it and passed away from it)

If any one will pass-by, we are open
 Tuesday, Thursday and Friday from 10
 am till 5 pm and every last Saturday of
 the month is our club-day and member
 gathering.

There is plenty to see in the Buiten
 Museum and if you contact me you have
 a Guide

We have a lot of working objects My
 address and telephone number 0031-78-
 6146002

E-mail jhoefnagel@chello.nl

HALF YEARLY MEETING

The half yearly meeting is to be held at the Hanover International Hotel, Bromsgrove, Worcester. The dates for this event are Friday 11 October - Sunday 13 October 2002. Preferential rates have been booked for rooms, the cost of these rooms is £37 per person per night, bed and breakfast. Use of the health and leisure facilities is also included in the price. If you wish to book a room the telephone number of the hotel is 01527 576600 and please quote booking reference no 3537/1.

Obviously if you do not wish to stay at the hotel there is other accommodation around and about and this can be obtained from the Bromsgrove Tourist Information, their telephone number is 01527 831809. The opening times are Monday to Saturday 10.30am to 4.30pm.

More information will be provided by Nigel nearer the date in his usual letter inviting members to the meeting.

Knotmaster Series No. 13

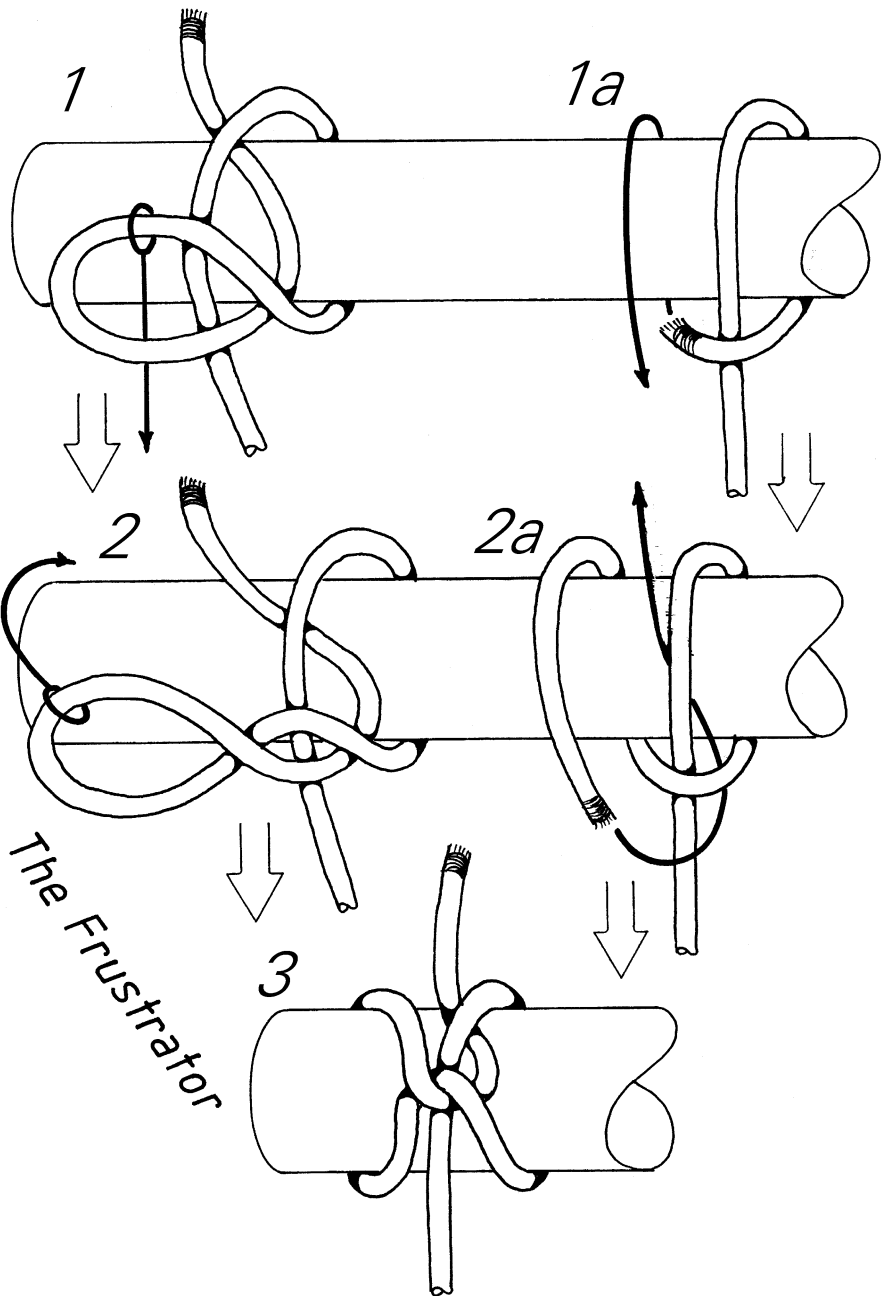
*"Knotting ventured -
knotting gained"*

The Frustrator

This bag, sack or binding knot is a strong alternative to both the constrictor and the strangle knots. It may be tied in the bight (fig's 1 - 3) where the end of the post, spar or other anchorage point is accessible.

To a ring or rail with no ends in sight, tie it with a working end (fig's 1a, 2a, 3).

Pull on both ends at once to yank it as tight as it will go, when it will prove hard to undo - hence its name. This knot was another one of the many devised and published between 1986 and 1989 by the late Harry Asher^{IGKT}.



Chariot Queen

by Richard Hopkins

Early last year a team of archaeologists from the British Museum were excavating a site at Wetwang in Yorkshire, England. In the same area there had been other finds and cart burials, so when the remains of a vehicle were found, it was at first assumed that a chief had been buried with his chariot in the third century B.C.

After several items of chariot furniture had been removed the bones were exposed and there were indications that it was in fact the grave of a lady. Subsequent work confirmed this and suggested that she must have been an important local figure to be buried with her chariot, as previous chariot burials were nearly all of males.

The BBC program *Meet the Ancestors* had become interested in the site. They try to recreate the features of the person buried, using reconstruction techniques that have been perfected for forensic scientists, and give background to the burial.

Since the site and the body were unusual, the BBC, together with the British Museum, decided to reconstruct the chariot for the program. It had to stay as close as possible to the original - no nails, screws etc - so a master wheelwright and carriage maker, Robert Hurford, from near Taunton was asked to construct the chariot but he needed help with holding the parts together. The brains had decided that because no metal fastenings had been found, the parts had

been held together with lashings and Robert required help with these.

Apparently a search on the Internet revealed the presence of the Guild and Mike Loades, who was coordinating the chariot details, contacted Brian Field to ask for help. Brian volunteered me as he knew I have many interests in primitive technology, would be daft enough to join in, and lived relatively close to Taunton - 60 miles.

When I first met Robert he explained that representations of Iron Age chariots on coins and Roman carvings show each side to be two arches with a Y in each arch.



He believes that this was an early suspensions system and that the floor of the chariot hung from the four arches. The suspenders were Y shaped so that the tension could be adjusted by pulling in the hanging straps. No archaeologist had thought of this.

He also said that the lashings were to

be of rawhide and had arranged to collect a cow's skin - which had been defleshed and dehaired only - nothing else.

This he stretched on a frame and allowed to dry for three days as it was very wet.

It was kept moist and worked when damp so that on drying it would shrink to fit.

Eventually the hide and the wood were painted and patterns applied to the wheels.

I believe that the original would have used wooden pegs in the same way that early ships used trenails, even up into the last century, but was overruled, and the basic halving joints were secured by lashing. We cut strips from the hide and were amazed at their strength. They were about one centimetre thick and fractionally wider. As they dried they shrunk quite amazingly and thus pulled the joints tight.



The first problem was to devise a lashing that held components in each plane. At the corners there were the two members at right angles - easy - but there was also the vertical leg of an arch, which had to be secured, as bumpy ground could shake it out. This was

overcome by passing a peg through the arch leg over which the lashing passed, pulling the leg down into the joint. I thought that this was not playing the game if we could not use trenails, but it worked.



A more difficult problem was to make everything look pretty for the television cameras and so the final lashing is not as I first suggested, but it does look prettier than my original idea and was to prove perfectly secure.

Similarly, the joining of the two inner legs of the arch and their fastening to the frame involved art rather than craft and again it worked.

The next item to be built was the floor. This was a separate frame that was filled by a weave of 3cm wide straps. In fact it was a continuous strap about 30 metres long which I cut fairly quickly from the hide. There was no compunction about using modern blades to make work easier as in the Iron Age such tools were available.

The strap was laced into the frame

using a shortcut suggested by Europa Chang. The full strap was used at first and then we tensioned it using wedges to secure the strap at crucial points and pure muscle-power to heave. We gained several yards of strap which was then used elsewhere. Within an hour, the frame, which was about three inches wide and an inch thick started to bow as the rawhide began to shrink and spacers had to be cut to keep the sides apart until everything had dried out.

It finished up almost drum tight without any further effort. We were pleased that we had secured the strap without any nails, just folding it around wedges, which were drawn into the slots and locked themselves tight.

This platform then had to be tied to its supporting cross members.



Now we needed to work out the suspenders. It has been suggested that it could have been done using different, prettier knots and I agree, but at the time we did not know how long the straps

should be, how they would be adjusted, how much the rawhide would shrink, how they would be fixed to the frame, and - to me a most important point - how often they would have to be removed and replaced. This last point meant that the ends had to be free and could not be tied off until the last minute.



I decided to make straps of four-strand plait. This gave four thongs to tie off at each end and allowed plenty of flexibility. It also allowed a two strand lanyard knot and toggle to fit between the strands to pull the side together into the shape of the Y, and this was almost infinitely adjustable thanks to the gaps in the plait.

When lengths and position finally had been adjusted, pairs of thongs were taken in opposite directions and reef knotted. The surplus thongs were wrapped in diamond fashion around the arches and formed an early non-slip grip for the charioteer.

The axle was the next item to be secured. First I had to lash the shaped blocks or "cushions" for the axle to sit in. The axle had been made in one piece from green oak and had developed a slight bow, but this was in an acceptable direction and caused no problems. The cushions were simply held with an overgrown whipping of rawhide, which

shrunk and held firmly. The axle was seated in the cutouts and fixed with a more or less conventional square lashing. The problem with all of the lashings was that it was not possible to use frapping turns because of the carpentered joints. We relied on the shrinkage of the hide and in one or two cases I knocked in some thin wedges. After shrinkage of the hide they were hidden. (Ssshhh)

The pole required fixing to the centre of the axle and the front of the frame. This was a straightforward job and I used one-inch wide straps for strength, as these joints were crucial. Again I relied on shrinkage and the hide did not let me down, but it was pulled as tight as I could get it before finishing off.

By now we had run out of cow, apart from a few odd bits, so the rest of the tying was done with hemp. This was not the cop out that it might have seemed. There was not enough time to make sufficient cord from nettles or flax, and we believe that natural fibre rope was used in the Iron Age. It could have been used for all the lashings, but the brains decided on rawhide, which was excellent when shrinkage locked it in place.

The most important lashing was now to be attempted - joining the yoke to the pole.

The yoke had been built from information obtained from plaster casts of cavities at the original excavation site and was as accurate as we could make it.

A wooden pin, the hester, goes through the pole and is included in the lashing. Some believe that it is removable, allowing the yoke together with its lashing to be slid from the pole. There was some discussion about the correct position of the hester, but it was finally placed behind the yoke. A rein

from the left of the right hand pony came through a terret, around the hester, and then back to the right hand side of the left pony. It was supposed to synchronise their movements. The terrets were beautifully made bronze replicas of the originals and decorated with coral beads



Again the lashing had to look pretty and the usual problem of shaped joints prevented a traditional finish as the yoke was seated in a small recess on the pole.

This is where the Gordian knot is believed to have been fixed and I can understand why it was such a complicated knot. If this gives way then the ponies disappear into the distance while the pole digs into the dirt along with a loss of Iron Age street cred.

All was now ready except for cross braces under the platform to stop it knocking into the arches. These were anchored with toggles going through tongues of rawhide fitted as sleeves on the ends of the frames. These braces should be fairly taught, but no one else knew (or was prepared to learn) the waggoner's knot. I spliced in an extra



eye to the braces so that the end would go around the frame, back through the eye and could be hauled taught. I honestly believed that this was the simplest way to do the job.

If you see the program, you will, I am afraid, comment on the slackness of the braces. The film crew got it wrong and could not get the proper tension. It still worked, but I did not arrive until too late to improve it until we changed to the box body.

Mike Loades, who was going to drive the chariot (wearing a ridiculous wig) asked for a support strap so that when standing up he could maintain his balance. This taxi strap was made from rawhide offcuts as a four-strand crown sennit with a knob on the end, like a large

key fob, and tied loosely to one of the arches. Everyone who used the chariot made use of the strap without any instruction. It was the only addition for which we have no evidence but I believe that almost certainly there would have been something like that to maintain balance.

Another feature of the suspended platform is that it allowed the body of the chariot to be changed from the sports version, with a woven floor, to a box body, which was cushioned, for the “princess” to ride in. The change over was accomplished in a matter of minutes but the cross braces had to be retied, this time correctly.

Everyone who tried the chariot, as driver or passenger, found the ride to be

comfortable, even over quite rough terrain, so the suspension theory is practical.



It was manoeuvrable and during trials proved to be a good platform from which to throw javelins, and a warrior in trouble could be rescued by jumping in

the back while the chariot was still moving. I assume Iron Age warriors were a little more agile and practiced than our modern day actors.

An interesting fact about the wheels is that the method of shrinking an iron tyre onto the wheel was known in those days, (we used this method), but was then lost for nearly 1800 years, and tyres, if used, were nailed onto the rims.

The B.B.C. painted the finished chariot using genuine Celtic patterns which bear no resemblance to those popularly known as “Celtic knot” and zoomorphic patterns. These are in fact Pictish, and did not become widespread until about 600 years after the original chariot was made.

I was involved with the project for about twelve days spread over two months and it required me to drive over 1600 miles, but I have been promised that the Guild will be mentioned in the credits. It required a flexible approach to knotting (both physical and mental), was great fun and I learned a lot, but it would not have been suitable for the type of by-



the-book knotter who believes there is only one way to tie a bowline. (I have met some of these at public shows, but not too many in the Guild.) I hope that our members will all get the chance to

see the program at some time and find out all the other interesting facts that emerged, for which there is no space here.

The Queen and her chariot getting very annoyed with the paprazzi.

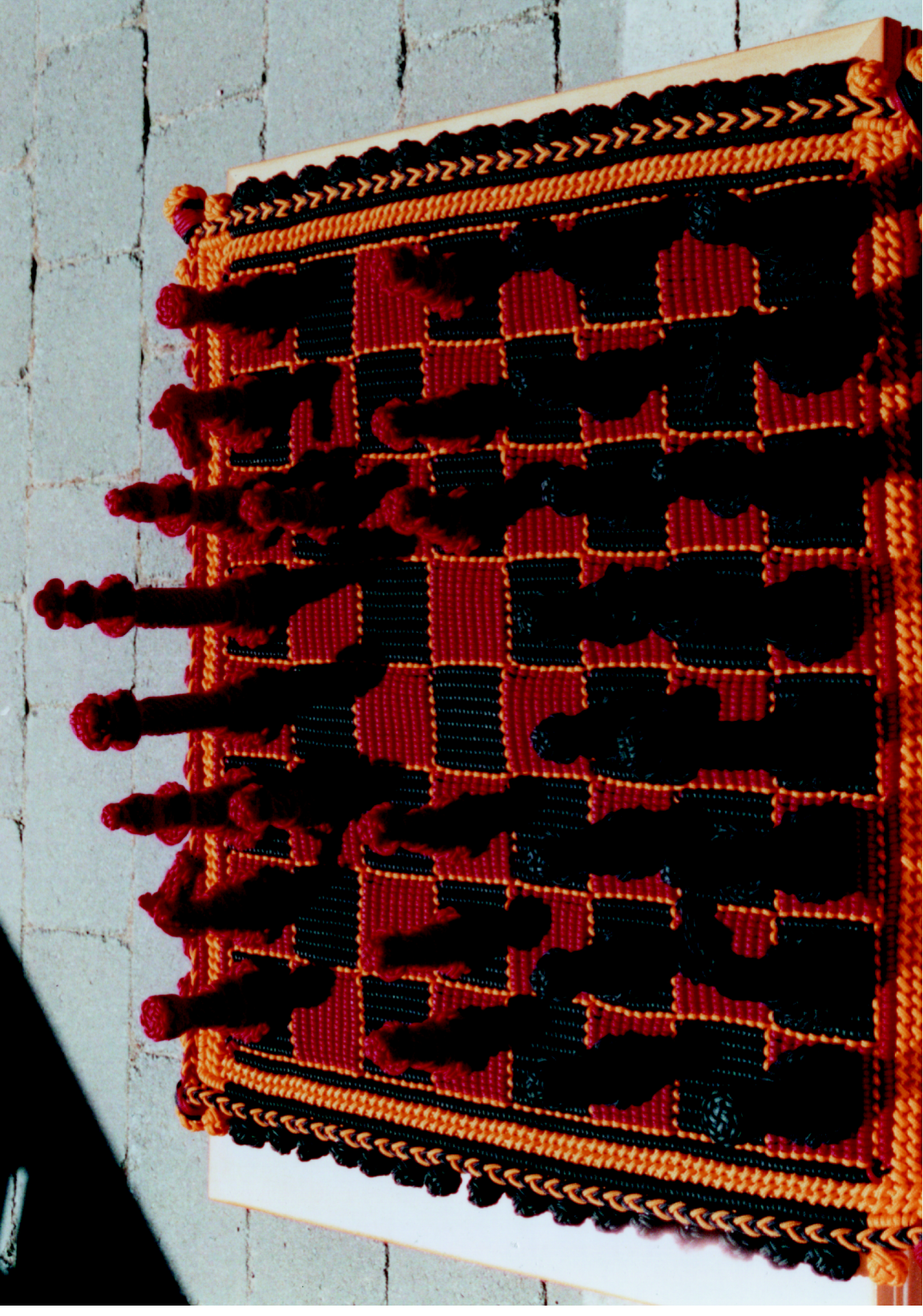


Knot Gallery



Above: An unusual frame to a knotboard by Jeff Wyatt.

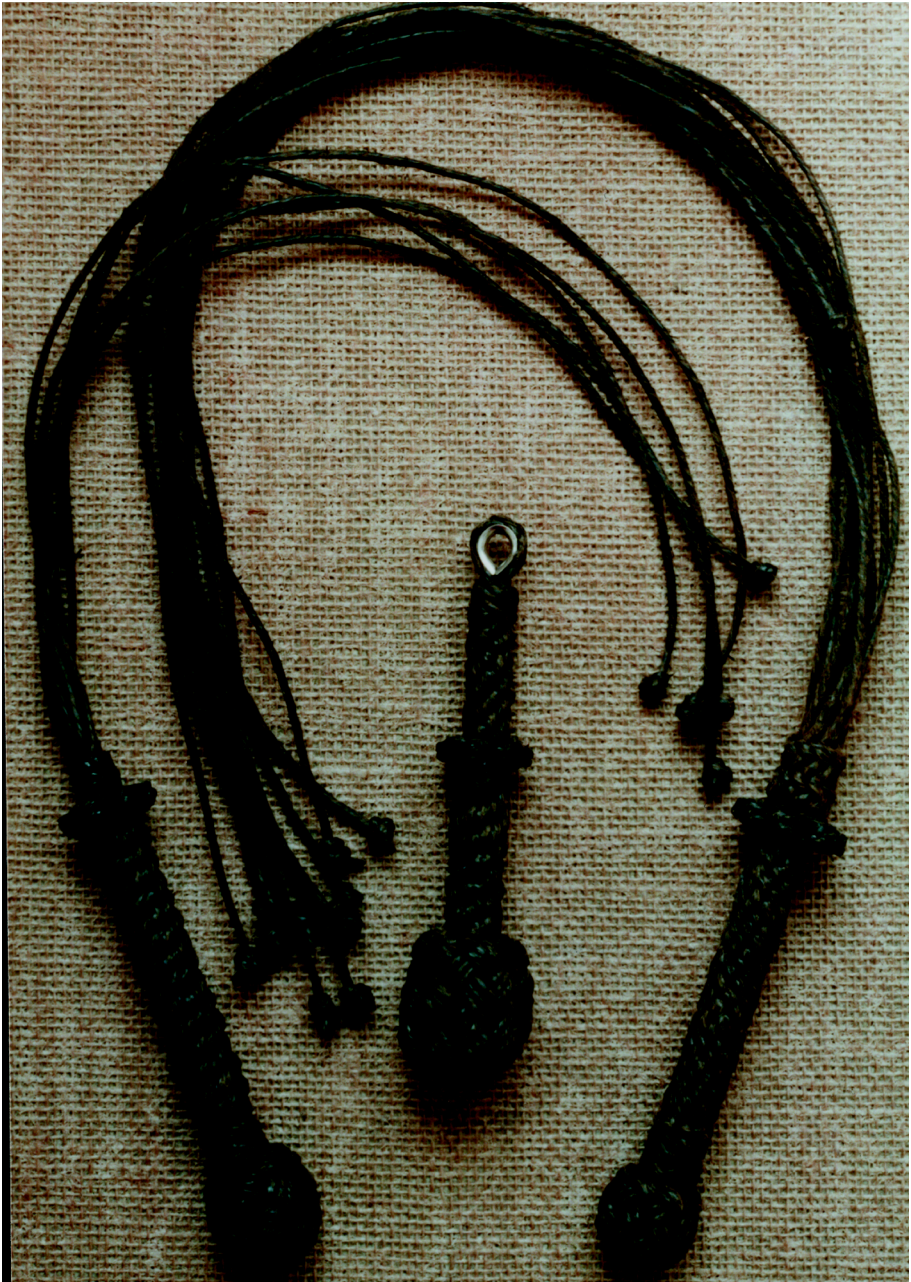
*Overleaf: A splendid chess set by Richard Hodge
and a finely crafted pair of chest becketts from Rod Orrah.*







Macramé work covering earthenware jar from Joaquim Paulo Escudeiro.



Cat o' nine tails and bellrope in tarred hemp by Thomas Simpson.

Two Ways to Design A Spherical Covering Knot - Part I

by Jesse Coleman

This note provides detailed instructions on how to design spherical covering knots (SCK's) by modifying the mat drawings of Turk's head knots (THK's). Two methods are presented. Both methods result in two-cord knots and a way is given to modify these knots to one-cord knots.

Suppose you wanted to cover a golf ball with a SCK. You could probably find a diagram that would show you to do it. Suppose, however that you also wanted to cover a baseball, a soccer ball, and American football and a flat biscuit shaped object with similar knots. Finding the diagrams for these different sizes and shapes would not be easy, although they probably exist somewhere. This note shows how to

design your own SCK's that can be made to cover many sizes (spheres from golf balls to basket balls) and shapes (American football or biscuit shaped).

These diagrams of spherical knots are made with two lines. I think that the knots are most attractive when tied with two cords of contrasting colours. For some reason that I do not understand, SCK's and THK's have been tied almost exclusively with one cord. When SCK's are tied using the two methods given here, with cords of two colours, a barber-pole pattern runs from one end to the other and the result is (to me) wonderful to behold.

This note is in two parts, giving two different but similar ways to design spherical covering knots. We restrict



ourselves to designing a SCK by inserting a single, separate cord into a THK. Actually, we modify the mat drawing of a THK rather than the knot itself and a true THK is not tied. If we start with a multi-strand THK, then one or more cords must be added to create the SCK.

How to Draw Plans for a Spherical Covering Knot:

First Method

Let's begin with a mat drawing of a 3B X 4L THK (figure 1). Notice that all indication of which cords goes over or under is missing from this drawing. I work with a pencil so that I can erase the crossing points and draw in the proper over/under pattern at a later time. All compartments in the drawing have either 3 or 4 sides. Regardless of their exact shape, I call these compartments triangles or squares. The center compartment is a triangle only because we are starting with a 3 bight THK. I draw mat diagrams of ordinary THK's using the method in my note to KM 57.

The centre compartment is surrounded by three triangles. As shown in figure 2, start by drawing a line through one of these triangles, parallel to the inner line. I usually draw this second line with a red pencil so that the two lines will contrast. Drawing the two lines in two colors reduces confusion. Extend the line through the neighboring square into the outer triangle as shown in figure 2. This line turns and heads back to the center of the knot as shown in figure 3. Continue until the starting point is reached, as in figure 4. Erase all line crossings and redraw them, indicating a proper over/under pattern. At this point, I usually

complete the drawing by going over the two lines with black and red ink and then erase all remaining pencil lines. The completed knot is shown in figure 5. This knot is almost identical to Ashley's knot number 2220.

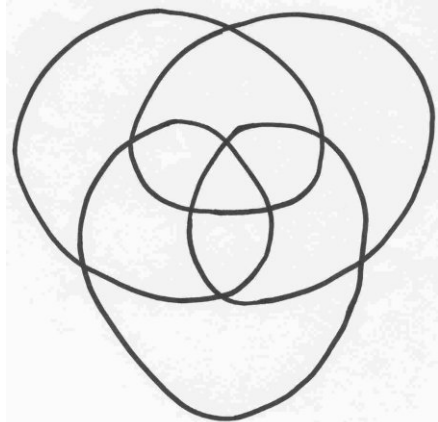


Fig. 1 - A 3B x 4L Turk's Head knot with line crossings not marked

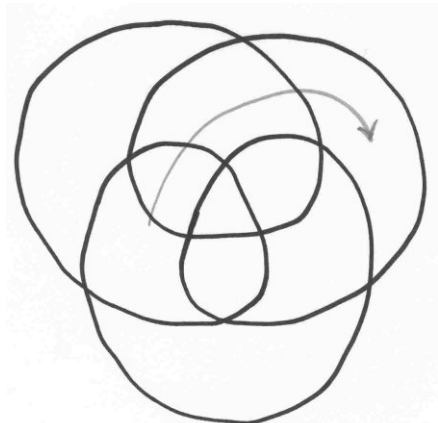


Fig. 2 - Drawing a Spherical Covering Knot (First method), the first three crossings of the second line.

To actually tie knots as complex as some of these may be, I use pens, a cork board, and large drawings. Enlarged drawings are essential so that the cords may be positioned properly. After the knot is worked up using the drawing on a cork board, check for errors. Each cord must follow the over/under pattern. As I finish pinning an individual cord on the board, I firmly tie the ends together to prevent tangling and raveling of the weave. After the knot is worked up on the cork board, I lift it up and place it on a sphere. I prefer a rough sphere such as Styrofoam so that the cords do not slide about as they are being positioned. Also, Styrofoam allows me to pin the cords in place in the early stages of working up the knot on the spherical core. The compartments in the centre of the drawing are much smaller than the corresponding compartments at the outer edge. When I move the knot from the cork board to the sphere, it resembles a jelly fish with tentacles hanging from a round body. I work cord into the center of the knot and take it away from the outside so that all knot compartments are about equal in size. Then I double the knot once or twice, tighten the cords, tuck the ends and then admire the finished product.

You can use this method of making a SCK by starting with a Turk's head knot with any number of bights and any number of leads. If you start with the drawing of a multi-strand THK then the inserted line may also resemble a multi-strand THK and the new line may have to be restarted.

This note provides several formulas. Those knot tiers that are allergic to maths may skip over most of them and still be able to successfully design their own SCK's. The results of the formulas for

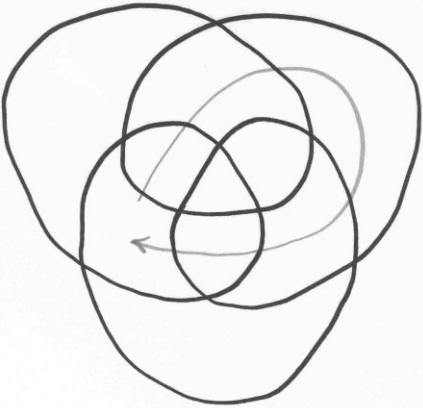


Fig. 3 Drawing a Spherical Covering Knot (first method), the first partial circuit of the second line

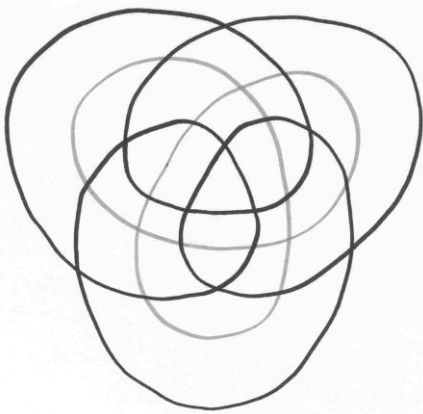


Fig. 4 Drawing a Spherical Covering Knot (first method), the completed circuit of the second line

the shapes and sizes of SCK's are given in tables.

The Shape of the Spherical Covering Knot, First Method

Suppose we tie the knot shown in figure 5. Aside from the obvious point that its shape depends on the shape of the core we mount it upon, what will be the knot's natural shape? Following Ashley's lead, two lengths determine the shape of the SCK. They are the circumferences of the sphere around the "equator" and around the "poles". For the knot shown in figure 5, there are twelve cords around the poles (from the inside of the mat to the outside and back again). There are also twelve cords crossing the equator of this spherical knot. Since the polar and equatorial circumferences are equal, this knot is perfectly spherical. This spherical knot is made from two knots that resemble THK's. A 3B X 2L "THK" (the second line we drew) is embedded inside at 3B X 4L "THK".

For an ordinary THK, the equatorial circumference (EC) will be twice the bights and the polar circumference (PC) will be twice the leads. That is, for an ordinary THK: $PC = 2L$, and $EC = 2B$, where B = the number of bights in the THK, and L = the number of leads.

Whenever a spherical knot is made according to this method, the second or imbedded "THK" will have the same number of bights as the first "THK" and two less leads. What shape will it be? Let B and L represent the numbers of bights and leads in the first or larger "THK", then $PC = 4(L - 1)$ and $EC = 4B$.

If the number of leads in the larger "THK" is one greater than its number of

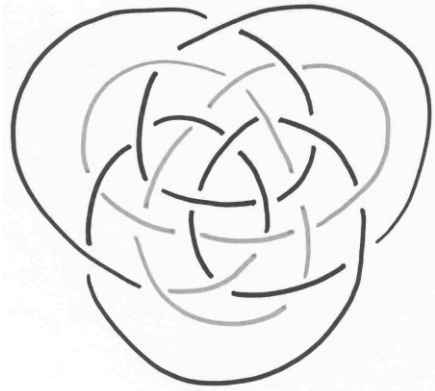


Fig. 5 - Spherical Knot Covering (first method), started with a 3B x 4L Turk's Head knot, similar to Ashley's knot #2220

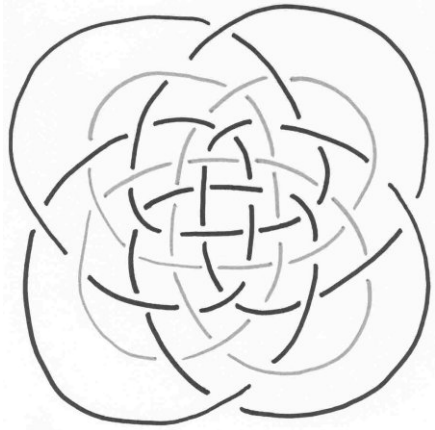


Fig. 6 - Spherical Covering Knot (first method), started with a 4B x 5L Turk's Head knot, similar to Ashley's #2218



Fig. 7 - Spherical Covering Knot (first method), started with a 4B x 7L Turk's Head knot, similar to Ashley's knot #2219

bights ($L = B + 1$), then the resulting SCK will be a perfect sphere. For example, if a SCK is drawn by starting with a 5B X 6L "THK" then the imbedded "THK" will be 5B X 4L. The polar and equatorial circumferences will both be 20 and a perfect sphere will result.

Ashley's knot number 2218 is a perfect sphere with 16 cords crossing both the polar and equatorial circumferences. When we draw this same knot using this method, we see that Ashley's knot number 2218 is made of a 4B X 3L "THK" imbedded inside a 4B X 5L "THK". However, Ashley used one cord instead of the two cords used here. Referring to the formulas for the circumferences, $PC = EC = 16$. Figure 6 is a drawing of this perfectly spherical SCK made by this method.

Ashley describes his knot number 2219 as a prolate spheroid with "sixteen

parts around the central girth and twenty-four parts around its lengthwise circuit." This knot may be drawn by imbedding a 4B X 5L "THL" inside a 4B X 7L "THK". When this is done, $EC = 16$ and $PC = 24$, agreeing with Ashley. That SCK is shown in figure 7.

A prolate spheroid can be thought of as a sphere that has been stretched along its poles so that its polar circumference is larger than its equatorial circumference. An oblate spheroid (Ashley's no 2216) can be thought of as a sphere that has been squashed at its poles so that its polar circumference is less than its equatorial circumference.

You can mount many nonspherical SCK's on a spherical core and get a nice spherical knot. However, if the knot is of the prolate spheroid type then the square cells around the equator will be stretched apart and those at the poles will be jammed together. The resulting SCK may still be very attractive, but it may have gaps between the cells along the equator. This problem will be reduced if your SCK is more nearly spherical.

The Size of the Spherical Covering Knot: First Method

So much for the shape of the SCK. How large will it be? That is, what surface area will it have, disregarding the size of the cord used? Finished SCK's are a patchwork of little squares, consisting of three cord segments if the knot has been doubled twice. How many of these little squares will a given SCK have? In a mat drawing of a SCK, lines cross lines. Each crossing will become one of the little squares or cells in the finished knot. What is this crossing number (CN)? The size of the finished

SCK is determined by the crossing number, the diameter of the cord used, the diameter of the spherical core on which the knot is mounted and on how many times the knot is doubled.

For an ordinary Turk’s head knot, the crossing number is $CN = B(L - 1)$, where B is the number of bights and L is the number of leads.

For a spherical covering knot made by this method, the crossing number is given by $CN = 4B(L - 2)$, where L is the number of leads in the larger “THK”.

That is, the number of small squares covering a SCK, made by this method, will be $4B(L - 2)$.

Table 1 provides the crossing number or the number of small squares that cover a SCK made by this, the first method. The cells in this table that have bold font are for those SCK’s that are perfect spheres. The table also provides polar and equatorial circumferences.

	B = 2	B = 3	B = 4	B = 5	B = 6	B = 7	B = 8	B = 9
	8	12	16	20	24	28	32	36
L = 3	8	8	12	16	20	24	28	32
L = 4	12	16	24	32	40	48	56	64
L = 5	16	24	36	48	60	72	84	96
L = 6	20	32	48	64	80	96	112	128
L = 7	24	40	60	80	100	120	140	160
L = 8	28	48	72	96	120	144	168	192
L = 9	32	56	84	112	140	168	224	252

Table 1, Crossing numbers for spherical covering knots designed by the first method. B and L refer to the number of bights and leads in the larger “THK”.

Numbers in the second row are the equatorial circumferences for SCK’s with the indicated numbers of bights. Numbers in the second column are the polar circumferences.

A SCK made by this first method will have a “barber pole” pattern if tied with cords of different colours. Suppose you make a SCK by this method and you use a red cord for the larger “THK” and a blue cord for the smaller imbedded “THK”. The bottom of the SCK will consist of four red squares. The knot will have $2B$ stripes (B red ones and B blue ones) spiraling to the top which will also consist of four red squares. The length of these stripes is given by the formula: $length = 2L - 5$.

The completed mat diagram of a THK or SCK consist of many short separate lines. Each line is a crossing of a cord in the finished knot. For example, there are 24 short lines in figure 5 and 24 is the crossing number for that knot. In figure 5, notice that the outer and inner bights are from the same dark line. Also, the crossings of the same color form spirals between these two rings of bights. The color pattern of the finished knot can be visualized in the mat drawing.

'Lester's Trefoil and Cinquefoil Reef' Earring Gems

by John Halifax

I first met IGKT member Lester Copestake at the AGM in 1995 and again in 1996. I was very interested in his discovery of how to make Reef knot Trefoils and Cinquefoils for earring decoration, and how to put a Turk's head on a Reef knot! Like most people, I had not given much thought to using a single strand Reef knot other than when wrapped around another structure.

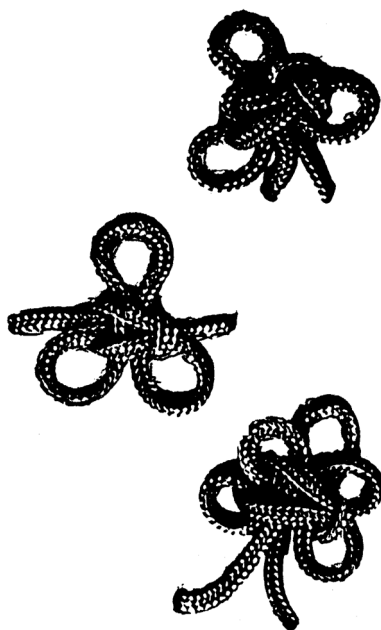
I hope the photocopy designs of actual knots are self explanatory, but just in case: make a single strand reef knot and just pass the bight through the double bars of the knot to make a Trefoil Reef. The Cinquefoil Reef is made by passing the ends up to the top single bight and down through the centre bars the opposite way. The Turk's head on a Reef is made by crossing the ends over or under the top bight and weaving over - under and round. It is not a perfect Turk's head; you have to cheat a little to complete and make a reasonable job of it.

While currently looking through my scrap book of recipes over the years for a tit-bit item to fill in any odd few minutes for a meeting of the East Anglian Branch, I came across my notes of "Lester's Little Gems" and thought that my little discovery of a Reef knot riding tandem on a Figure Eight would be a suitable companion to Lester's Reef collection (which I first published in KM 62, p 50).

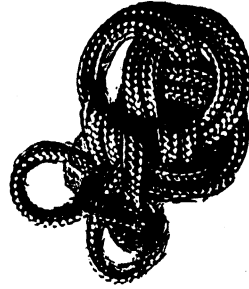
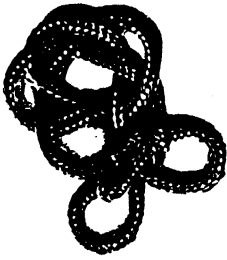
I contacted Lester and as he had not published his discovery he agreed to me

doing so in conjunction with mine, with acknowledgements to him of course!

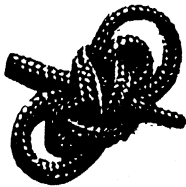
To mount actual earrings, you will need to find a retailer to acquire the earring findings. I suggest you use approximately 1.5 mm cord and harden it with 50/50 PVA glue and the twin pack epoxy resin glue to attach your knots to the mounts with.



The Trefoil & Cinquefoil



Turk's Head on a Reef Knot



John's Reef on a Figure of Eight

A Suit of Ropes.

From Richard Hopkins

In 1983 a pack of cards was sold at Sotheby's for £90,000. It was a beautifully preserved, hand painted Flemish pack of 52 cards dating back to the 15th Century.

The point of interest to us is that instead of the suits of Hearts, Clubs, Diamonds and Spades with which we are

familiar, the suits were Horns, Dog Collars, Double Nooses and Ropes.

I have not been able to find an illustration of the suit markings but perhaps someone can discover some and send it to KM.

Shire publications. Playing cards. George Beal 1988.

The Fisherman's Knot Anomaly

by Geoffrey Budworth

I have always tied and taught the fisherman's knot with identical sliding overhands, both either S-laid or Z-laid, so that the two pairs of entwined knot parts are snugly embedded beside one another, the twin knot bellies also lying neatly together (fig's 1-3). I never considered anything else until, very recently, Des Pawson noticed what I did and said; 'That's not how I do it.'

He ties unmatched overhand knots (one S-laid, the other Z-laid) which, when drawn together, face in opposite directions (fig's 4-5). Is one of us wrong?

Of the 40 knotting authors I have since looked up, 28 (70%) describe and illustrate 'my' matching version. Reaching back over 125 years, they include: Peter Owen (representing the Royal Yachting Association); Wendy Goodhind (for the Girl Guide Association); Pieter van de Griend^{IGKT}; Charles Warner^{IGKT}; Percy W. Blandford^{IGKT}; Clifford W. Ashley; J. Tom Burgess; Cyrus Lawrence Day; Sam Svensson; Charles L. Spencer; 'Gilcraft' (for the Scout Association); A. Hyatt Verrill; Paul N. Hasluck; and 'Tom Bowling'. A persuasive crowd.

Advocates of the unmatched and consequently skewed layout, on the other hand, total just 12 (30%) but include such equally heavy hitters as: Marc P.G. Berthier; Bigon & Regazzoni; Eric Franklin^{IGKT}; Graumont & Hensel;

Floris Hin^{IGKT}; and John Sweet (also for the Scout movement).

Only three of those 40 authors – all, as it happens, Guild members – portray and briefly discuss both versions of the knot. In a 1986 article titled '*From Farmer to Fisherman*' (Knotting Matters, Issue No 16, pages 17-20) Harry Asher and Desmond Mandeville consider the ergonomics – but not the aesthetics – of tying each variant and conclude that one is as stable as the other. In *The Alternative Book of Knots* (1989) Dr. Asher also makes the general observation that if a knot is symmetrical it is likely to be a good one. While Roger E. Miles, in his 1995 book *Symmetric Bends: How to Join Two Lengths of Cord*, comments that the skewed version '...probably works as well'.

To all of the above I will add Budworth's rule that an elegant knot is always preferable. (Caution! This guideline cannot reliably be applied to people.)

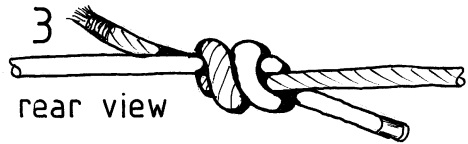
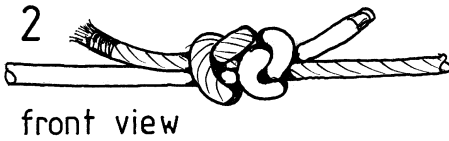
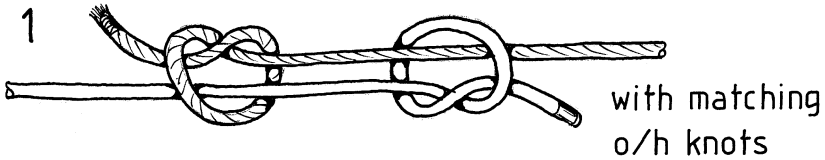
Is one of these knot layouts more effective? If so, we ought to know. If not, why fuss? Except that, to my mind, the skewed one is ugly and unattractive ... but, then, the matched version is the one I learnt when young and have done for more than 50 years since then; and, although practice does NOT make perfect, it does make permanent. Do anything often enough and – right or wrong – it will come to feel natural. Still, two out of every three knot writers agree

with me and depict the matched version as the orthodox one.

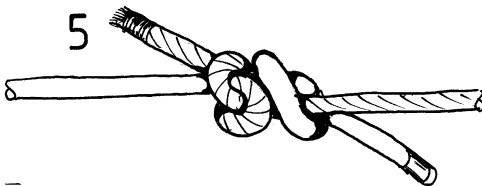
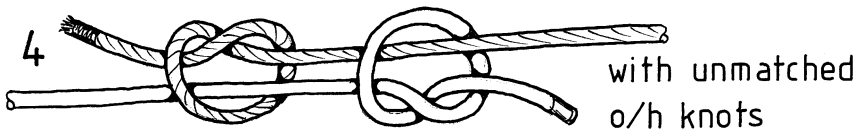
bother about this? Or would I be better off keeping bees?

So what do you think? Am I right to

Orthodox



Irregular



GB

Knot Tattoos

by Cy Canute

*Ancient Britons, so they say,
Wore woad of a deep blue hue;
But Polynesians may
Have discovered the tattoo.*

There was a time when tattooed individuals – apart from servicemen (mostly sailors) – were likely to be either fairground freaks or dodgy characters whose tattoos were not so much folk art as disfiguring graffiti.

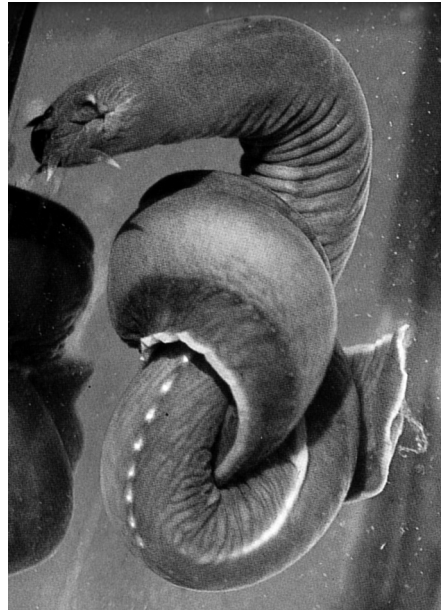
Nowadays tattoo artists are more skilful, their clients more discerning, and I doubt if there is any family which does not have at least one relative (for whom beauty is truly skin-deep) with an inky adornment.

Do knots feature at all in this bizarre industry? Key and click into the world wide web [Search: 'Tattooing'] and you will find colorful images of skin displaying a variety of Celtic knot patterns. Proper knots, on the other hand (or, indeed, on any other body part), have yet to appear in the tattooist's catalogue or the customer's wish-list. So, who fancies a tattooed knot?

A star knot would be neat, a monkey's fist more macho. Turk's head devotees might opt for a neat bracelet encircling wrist or ankle. Pure knot theorists could display a trefoil knot (tricolorable), although adherents of applied knot theory may prefer something by Georg Schaake. Even animated knots may be

achievable, if cunningly located over movable creases, folds or flaps ... especially upon us older mortals who look as if we need ironing.

Whether or not tattooed knots are then daringly revealed by minimal summer clothing or still discreetly hidden beneath it – deltoid or derrière - will depend upon the wearer's exhibitionist tendencies. But perhaps, after all, we should simply go for the Guild logo and wear it close to our hearts.



Man is not the only knot tyer. Here the hagfish creates an ovehand knot. (Nature Australia, Spring 2001) Len Cusack

Branch Lines

Devon Branch

After a busy summer and autumn we were invited to Buckland Abbey to an Elizabethan weekend. What a splendid occasion most, enjoyable all dressed in proper costume including a visit from Sir Francis Drake with his lady.

The Children were entertained by George Storer with his rope puzzles. We hope for a repeat this year. Also a big thanks to Charlie Smith. With so many invitations we are getting short of Devon-strators? Please would any Devon members who could help please phone me.

Macramé is it making a comeback? I have been asked to do a Duke of Edinburgh Award sampler day in Plymouth. I asked the local branch secretary to let me know what he would like sampled. Surprise surprise the list included macramé. What a chance for macramé fans contact your local D of E Award secretary and offer to help, you and the members in the phone book. Welcome back macramé.

Denis Murphy

East Anglian Branch

Once again on a pleasant Spring Saturday afternoon 23rd March 2002; nineteen interested members of the East Anglian Branch gathered at the Education Room of the Museum of East Anglian Life at Stowmarket, Suffolk, U.K. for our half annual meeting.

We opened proceedings with 'Popping Champagne' corks, about which I will do an article for publication as soon as possible.

As planned Des Pawson took us into the decorative art and craft of 'Half Hitching' and 'Needle Hitching'. Showing us examples of boat fenders in substantial size manila rope in particular an approximate two metre length 'bow fender' he is currently working on and an array of smaller examples of 'needle hitched' bottles, flasks and boxes etc. He then demonstrated the techniques used to achieve differing designs and recommended the 'Guilds *Knotcraft* publication by Stuart Grainger' as perhaps one of the best references to learn the skills of this lovely craft!

We carried on after the tea break with an enjoyable 'hands-on' session, trying our skills at this very worthwhile aspect of our craft. With lengths of cord entangled around feet and legs of chairs; to such an extent that I think we were all well and truly 'knotted' and 'hitched'.

Before we all rushed off home we concluded with a variation on a theme of 'Sparkling Champagne' - more of which later...

Our next meeting will be at on Saturday 28th September, 2002 at the same venue and the topic will be a combined presentation by Irene on the comparisons and similarities between 'Knotting, Knitting and Netting.' This

will be followed by our esteemed colleague Ken Higgs, well known for his skill and knowledge of braiding. He will be discussing the intriguing versatility of the 'Overhand Knot and Half Hitch' which are the foundations of most of our craft interest!

John Halifax

Merseyside Maritime Museum

At the invitation of Carol White, Publicity Programme Officer Mersey Maritime Museum, Dave Walker invited Guild Members in the North West to a weekend of Knotting Demonstrations for visitors.

On Saturday, 16th February, members set up their exhibits and/or work.

Visitors were able to see rope making (Dave Walker and David Pearson), walking stick decoration (Frederick Watkinson), bottle decoration (Sheila Pearson), leatherwork (Fred Burks), splicing (Clive Williamson).

This was a continuous event from 1200 to 1630.

On Sunday there was a 1000 start and we were joined by John Heapy, hitches, and Sue & Roy Morris with their macramé.

The visitor count for this day was in excess of 260.

Many North West members visited the display during the two days.

There is a possibility that the Museum could invite the I.G.K.T. again next year.

Clive Williamson

Visitors admiring fine macramé work of Susan Morris



French Branch

The second national meeting of the French Branch took place on the 6th&7th April, in the internationally renowned Musée du Bateau of the Breton fishing port at Douarnenez.

In spite of a change of date (the meeting was originally intended for the 3rd weekend of March), 20 knotters took part and thoroughly enjoyed themselves with a public 1500-strong on the Sunday (3 times the same day last year), the museum was obliged to turn people away! Veterans of the first meeting on the Isle of Tatihou were happy to catch up on news of the year just passed and also welcome a number of new faces (and non-members) who look to swell the ranks of the IGKT in France.

The town mayor and local dignitaries came to encourage us and the town laid on a delicious buffet in the museum itself (a first) on the Saturday evening. It was a super meal, although I felt that members were more interested in the aperitif than the food! Once again the generosity, the companionship and the good-time-had-by-all amply repaid all the hard work put in by the organisers, who shall soon be getting to work on next spring's meeting which shall be taking place somewhere in Upper-Normandy.

So who came and what happened:

First on the list must be the long-standing exponents and promoters of the knotting craft Denis 'Spud' Murphy and Charlie Smith, who managed to bring with them objects to show, make a bell-rope for the museum and demonstrate the art of rope-making with the public all day long. They even got themselves in the local paper...twice! A big thank-you has to go to Henri & Janine Philippot for looking after them and us so well.

Talking of generosity, Patrick Moreau (President of IGKT France) gave himself totally to the event and had time for everyone, public and knotters alike. Explaining knots, encouraging and praising people's work as well as promoting the event - he must have been completely exhausted when he got home. Des Pawson brought along his shop and laid on a good show fender-making. His expertise in the French language seems to get better and better, especially after a glass or two. Des' surname got transformed by a young lad during the tombola to Dez Paillason, which when translated means Des Doormat. Terry Barns astounded Pat Moreau with a variation of the lanyard knot tied in silver thread, so much so that he is going to use it for his jewellery collection Nouages. Ever pragmatic, Terry seems to be very modest about his achievement and is keeping his head on his shoulders and feet on the ground.

Luci Girod-Roux rolled into town from Le Croisic with a fine display of her production of ditty-bags and knot jewellery in leather. Europa Chang amused children and adults with her origami and also showed us some incredibly intricate Chinese-knotting, including an avant-première of a knotted anchor she has recently designed. Sylvain Berger presented some of his fine work and did the good deed of repairing the museum's bell, adding a beautiful bell-rope to boot. Patrick Lefour donated a knot-board for the tombola and kept people busy with the six-knot challenge, which was a great success with the public as usual.

Accomplished rigger Yffig brought in his tools and got on with some work he is doing on a ship in the museum's collection. His wife Patricia brought in

her canvas bags and sail-making work. Michel Straub donated a handsome piece to the tombola and generally welcomed the public and kept things chugging along nicely - he is also a superb chef. Knots in other materials were brought in by sculptor Dominique Josse and Blacksmith Eden Fowler, who showed off their work in oak and iron. The editor of the *Almanach du Marin Breton* Yvon Gogé and Daniel Cadiou from the association for maritime employment La Touline Bretagne & International also made a much-appreciated appearance.

Thanks to everyone who made the effort to come to Douarnenez and see

you next year (if knot before) - 'Cheers call me George!'

Graham macLachlan

Yffig explaining about his work.



Postbag

The views expressed in reader's letter do not necessarily reflect those of the Council. The Editor reserves the right to shorten any letter as necessary.

Eye Splice Practice

I (a brand new member) recently talked to a nearby member, Phil Woodham, and decided to pass on something I mentioned to him and others. Phil had not seen this idea in any of his books. I would be very surprised to find out that no one else had thought of this idea before I did. A co-worker of mine was having some problems with doing an eye splice in three-strand rope. The strands would unravel and cause him problems. I had an idea that works very well. It is a practice rope that is re-usable. I purchased some braided rope in three different colours and used them as individual strands. You can tie the three rope/strand ends together and secure them to something to prevent them from moving. Using the left hand, give a strand a good right hand twist so the it naturally wraps and lays to the right and under the other strands; this seems to be the most important part. Then bring the next strand(s) over the top giving them a right hand twist as well, so they lay correctly. Once you get the hang of it and get the first few wraps well placed, the rest goes much easier. With a little trial and error, you can get a very good finished rope that can be as tight or as loose as you like. Rubbing the finished rope back and forth and rolling it between your hands or over your thigh

helps to balance out any minor uneven spots. Once the ends of your new rope are secured, it will hold up just like regular three-strand line. Making a tight rope is tough on the hands, especially the thumbs, but helps the rope stay together better after repeated use. I used Stay Set braided rope from New England Ropes and slowly and carefully melted the individual ends to seal them and squeezed them to a point with needle nose pliers. Use the flat surfaces to finish as the teeth leave little ridges that can snag. A constrictor knot backed up by a surgeon's knot on the opposite side prevents any unravelling of the working ends. Use solid coloured ropes and the standing part and working ends are all colour coded. This makes a pattern that will shows clearly if you have made any mistakes. Use the same colour lines and few will notice that you have made the rope yourself. If you leave very long working ends you can also practice and experiment making knots back down the rope. This gave me the chance to practice the Matthew Walker style knot until I was able to get four cycles. To cut costs, you can use braided cotton cloths line that gives you a wider option in how much twisting you want to do. You can also dye the cotton rope if you like. This idea can be carried to an extreme. Treat the braided lines as if they were single fibres twisted into yarns instead of a rope. Twist these "yarns" into "strands". At this point you have something that looks like cable laid rope. Finally, twist these "strands" into the finished (mega) "rope". Even with 3/16 (5 mm) inch braided line you get a very thick rope. It looks rather odd but it is right handed Z laid.

*Steven A. Szilagyi
Merritt Island, USA*

Tethering Goats

In reply to Richard Hopkins letter in March 2002 *Knotting Matters*. The goats could easily and quickly be restrained in the order he describes by using a chain sinnet with each link being formed around the neck of a goat. This would produce the result described, be quick to tie and come undone at a pull.

David Griffiths
Cornwall, UK

Self-knotting Knots

Those wishing to inquire further regarding self-knotting knots - Plug Aids a Knotty Problem, KM 74, p21 - can find the original write-up in: *Physical Review Letters*, 87, 114301, 2001, Dynamic patterns and self-knotting of a driven hanging chain, by Belmonte, A., Shelley, M. J., Eldakar, S. T. & Wiggins, C. H. A very good popular summary can also be read at www.nature.com/nsu/010913/010913-8.html.

The conclusion of this research was that the simplest knots are rarely if ever formed by chaotic shaking, and only more complex knots can be formed in this way. I believe this is an error.

Bathplug chain does not hold the simple overhand knot ('trefoil' to mathematicians). I tried four different weights/gauges of chain, and found that in each instance an overhand knot would untie itself due to its own weight. It soon became apparent (to this knotter) that at least two points of friction in a knot (e.g., the figure-of-eight) are required for bathtub chain to hold it. So their results cannot be generalised to materials other

than bathplug chain. Had the researchers used almost any form of soft rope or cord, they would have found that the overhand knot is, literally, a snap.

Every rope-using profession practices at least one one-handed knotting technique. Magicians and jugglers refer to these collectively as "Flourish" or "Flying" knots. I have collected several of them in a pamphlet *How to Knot Juggle*, and would be happy to make it available at no cost to IGKT members who send me a stamped, self-addressed envelope. Members outside the U.S. should send an international reply coupon.

Eric Bagai
Portland, USA

Nylon Wives?

As concerns the nylon debate, were the wives of the original researchers called Nancy, Yvonne, Linda, Odile and Nina. (quote from *QUID 2000*). No theories and sagacious dismissals please - I want proof!

Graham McLachlan
Ancteville, France

Wire Rope Eye

Reading Roy Chapman's interesting article in KM74 p18 reminded me that in nautical circles Roy's eye is called a "Flemish wire eye", although I have noticed that in American yachting marinas it is often called a "Molly Hogan eye" (or splice). Not for the want of asking, I have never managed to find out who Molly Hogan is or was. On naval

and commercial vessels the eye is very rarely seen - if at all - nowadays due to the increase in more rigorous safety regulations over the years.

The eye splice is more likely to feature in yachting orientated books rather than general ropework books, one book that springs immediately to mind is Brion Toss' *The Rigger's Apprentice*. In the UK it's called *The Complete Rigger Wire and Rope*. A clear set of drawings and explanation is on page 151 (in the UK 1985 edition). An interesting addition is the inclusion of the splice's stated tensile strength, which is rated at 70 percent. To anyone with access to the book, this figure can be compared with the listing of conventional wire splice's tensile strengths in table 6 (page 104 in the 1985 UK edition).

Studying the drawings closely, one can start to recognise a resemblance in construction to various angling knots, which typically have a high percentage tensile strength/breaking strain.

The completion of the nautical eye differs slightly from Roy's explanation. From step 4, the six tail wire strands are spiralled down around the outside of the standing wire, tracking the seams between the strands, before being marled and served. For a neater finish (equally good for fancy work), reduce (separate) the six tail wire strands down to their single wire yarns, then lay the wire yarns straight down the standing wire (don't spiral), evenly encompassing it, then marl and serve to one's own satisfaction. This latter method permits the serving's diameter to be reduced overall or tapered by trimming out selected numbers of single wire yarns. (All these eyes may be fitted with thimbles.) In fancy work, it's more usual to cover the entire eye with a succession of decorative procedures.

All the mentioned wire eyes originate from a "four stranded rope Flemish eye". Ashley didn't feature a four stranded rope Flemish eye by name, but the first 2 drawings of #2752, on page 449 of *The Ashley Book of Knots*, shows a four stranded rope Flemish eye, prior to completion.

*Thomas Simpson
Hebburn-on-Tyne, UK*

Mug Knot Design

The other day, I received my beautiful IGKT mug, celebrating the Guild's 20th birthday.

On the handle of the mug is a beautiful knot design in a blue colour.

Upon seeing this knot design, I thought I would try to see if I could find a name and background on this knot that would also be of interest to other members of the Guild.

I was lucky; I found it in the first book that I looked in. That book was *Encyclopedia of Knots and Fancy Rope Work* by Raoul Graumont and John Hensel. In the book the knot is called The Pendant fig. 56 locate on plate 141, pp 281-282. Also fig. 9, plate 138 (p277) and fig. 373 plate 280 (p515).

*James L Doyle
Salem, USA*

A Palm Tree Braider

I would like to publish the following short issue to answer Roger Carter who

was asking for more information in KM 73 p43.

Dear Roger, your query is certainly based on the poor quality of my English! Well for me a "palm tree braider" is just someone who is able to tie or braid palm tree leaves! Don't laugh....

A friend of mine from New Zealand has made a rucksack (leaves of one colour) and handbag (two colours). She told me in New Zealand it is very common to "braid" (?) palm tree leaves, everyone learns this at school... do you think so? Or maybe is it only a women activity? About the handbag, I can add the motifs represent stylised fishes.

Some time ago my village (www.cadenet.com) was very famous for wicker basket making, but unfortunately the activity has disappeared now. Yet you can still find a rich and interesting museum, if you intend to visit Provence!

Olivier Peron
Ansouis, France.

Knot Errors!

I would rather not be writing this letter, but I feel it is the right thing to do.

I have just purchased Geoffrey Budworth's *The Book of Practical Knots*, and as always with any new book I buy, I tie every knot in it. I was disappointed to find ten diagrams are wrong!

I list below the offending items:

Knot	Page	Illust.
Water/Tape Knot	44	2
Double Overhand Noose	50	1&2
Fig of 8 Twin Loops	64	2
Water bowline	73	1

Constrictor Knot	94	1
Reef Knot Loop	110	1
Bull Hitch	121	4
Lap Knot	140	2
Knife Lanyard Knot	147	1
Turk's Head 5L x 4B	150	1

Having bought the book for £16.99 you would expect the book to be correct. I have been knot tying for over sixty years and able to work out the correct method of tying, but don't think a beginner would be able to do so.

Leonard Spittle
Tiverton, UK

(Sorry to hear of your disappointment with this book. Knot books appear to be prone to errors in the diagrams, despite the care taken by the authors and artists. The Ashley Book of Knots is a good example with over a hundred errors. Even Knotting Matters has its share of errors. I'm sure we are not the only activity that suffers from this. There must also be many beginners out there who while they may not spot an error immediately, are able to work out what went wrong. - Ed.)

Gorillas?

I have been rereading KM 74.

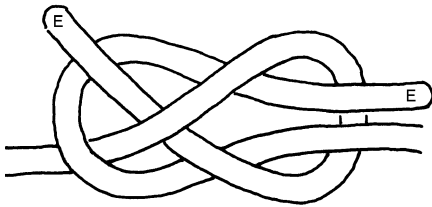
In Europa Chang-Dawson's review of Geoffrey Budworth's *Knot Rhymes and Reasons*, she asks if we should include gorillas as honorary members to the Guild.

In my view 'honorary' is the only way, as I certainly would not wish to annoy one by insisting on a fully paid subscription.

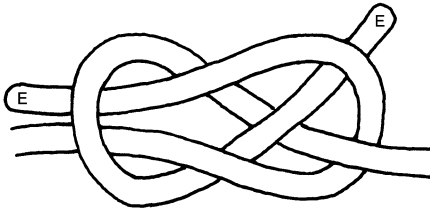
Richard Hopkins
Bristol, UK.

Gourock Ropework Logo

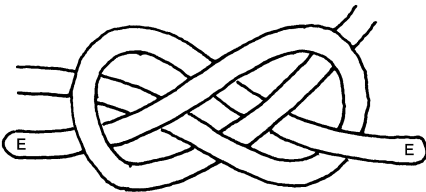
I believe the drawing was intended to be of a sheet bend, and the artist was given an example of the knot to copy from. He made a couple of changes for layout purposes, but did not appreciate their effect on the form and function of the knot. He was almost certainly not a knot-tyer!



The knot-tyer's way of presenting the sheet bend usually shows the 'tucked' end on top.



The artist appears to have drawn the 'flip side', which is still valid.



However, in order to make both ends come out at the bottom, he crossed the left end over the standing part. This didn't invalidate the knot, but the artist took one more liberty.



He reversed joined the right-hand end with the left-hand standing part to complete the loop! The resultant knot was not a sheet bend any more, as the tucked end no longer grips when the weight is put on the standing part.

I suppose you could call the knot a Sheet Bend Manqué - unreliable but not impossible

Tony Doran
Woking, UK.

(Sounds like there is a bit of the late Desmond Mandeville's 'Trambles' in this explanation - Ed.)

Caption Corner

Responses to picture of Charlie Smith in last issues caption corner are:

"Now this one needs both hands."

Europa Chang-Dawson

"I asked for the lavatory, not the ladder tree."

or

"Now when you get this far you just....."

or

"Of course, it would look better doubled."

Richard Hopkins

Knotting Diary

AGM's & 1/2 YEARLY MEETINGS

IGKT Half-yearly Meeting

Hanover International Hotel,
Bromsgrove, Worcestershire
11th - 13th October 2002
Contact: Bruce Turley
Tel: 0121 453 4124
E-mail: bruce.turley@blueyonder.co.uk

BRANCH MEETINGS

West Yorkshire Branch

16th July & 17th September 2002
Beulah Hotel, Tong Road, Farnley, Leeds
Contact David Pearson
Tel: 01502 519123

Midlands Branch

10th June & 12th August 2002
The Old Swan (Ma Pardoes), Halesowen
Road, Halesowen
Contact Nick Jones
Tel: 01384 377499

East Anglian Branch

28th September 2002
Museum of East Anglian Life, Stowmarket,
Suffolk
Contact John Halifax
Tel: 01502 519123

EVENTS

Cutty Sark Tall Ships Race

15th - 18th August 2002
Portsmouth
Contact: Gordon Perry
Tel: 023 9259 2808
email: Gordon@g-cisc.demon.co.uk

Inland Waterways National Festival

24th - 26th August 2002
Huddersfield
Contact David Pearson
Tel: 01502 519123

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The Knot Book	£3.99
Plaited Moebius Bands	£2.50
Knot Rhymes and Reasons	£1.50
Brian Field	
Breastplate Designs	£2.50
Concerning Crosses	£1.50
Eric Franklin	
Turksheads the Traditional Way	£1.50 *
Nylon Novelties	£2.00 *
Stuart Grainger	
Knotcraft	£3.60 *
Ropefolk	£1.30 *
Turks Head Alternatives	£2.20 *
Creative Ropecraft (Hardback - 3rd Ed.)	£9.95
Knotted Fabrics Hardback <i>price includes UK postage</i>	£9.00
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Something Different <i>with over 50 Button Knots</i>	£3.20
Colin Jones	
The DIY Book of Fenders	£9.95
Harold Scott	
On Various Cruciform Turks Heads	£2.50
Sliding Template Method for Designing Cruciform Turks-Heads Vol. 2	£3.00
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