

Knotting Matters

The Magazine of the International Guild of Knot Tyers



Issue 96
September 2007

GUILD SUPPLIES

BOOKS

Geoffrey Budworth

Plaited Moebius Bends £2.50*

Knotlore 2 - *a miscellany of quotes from fact and fiction* £2.50*

Knot Rhymes and Reasons £1.50*

The Knot Scene £2.00*

Brian Field

Breastplate Designs £3.50*

Concerning Crosses £2.00*

Eric Franklin

Turksheads the Traditional Way £1.50*

Nylon Novelties £2.00*

Stuart Grainger

Knotcraft £4.00*

Ropefolk £1.30*

Knotted Fabrics (Hardback) £9.00

Colin Jones

The DIY Book of Fenders £9.95

Harold Scott

A Guide to the Multi, Single-Strand Cruciform Turk's Head £4.00*

Skip Pennock

Decorative Woven Flat Knots with CD £12.50*

* Bulk purchases of these items are available at a discount -
phone for details

Supplies Secretary: Dave Walker
PO Box 3540, Chester CH1 9FU
email: supplies@igkt.net
Telephone: 01244 682117

Knot Charts

Full set of 100 charts - £10.00
Individual charts - £0.20

Knotting Matters

Some past editions available
- contact the Secretary for
details

Guild Tie

Long, dark blue with Guild logo
in gold - £8.95

Rubber Stamp

IGKT Member, with logo
(excludes stamp pad) £4.00

Badges - all with Guild logo

Blazer Badge - £1.00
Enamel Brooch - £2.00
Windscreen Sticker - £1.00

Certificate of Membership

Parchment membership scroll,
signed by the President and Hon.
Sec., for mounting or hanging
- £2.50

Cheques payable to IGKT, or simply send your credit card details
PS Don't forget to allow for postage

Knotting Matters

The Magazine of the International Guild of Knot Tyers

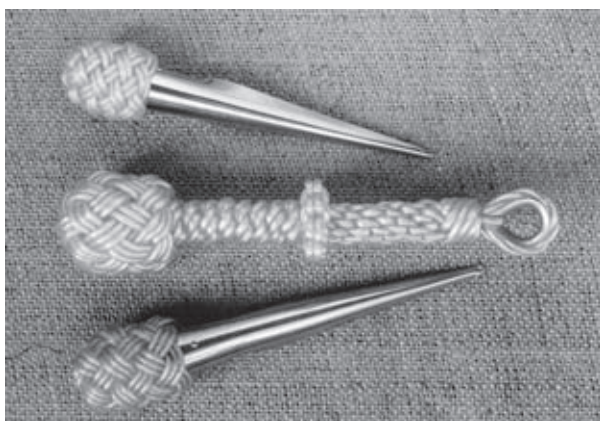
Issue 96 - September 2007

www.igkt.net

Except as otherwise indicated, copyright in Knotting Matters is reserved to the International Guild of Knot Tyers IGKT 2007. Copyright of members articles published in Knotting Matters is reserved to the authors and permission to reprint should be sought from the author and editor. All sources of quotations printed in Knotting Matters are acknowledged.

ADVERTISING RATES

	Members	Non-members
Full Page	£50	£70
Half Page	£25	£35
Quarter Page	£15	£20
Full (colour)	£140	£170

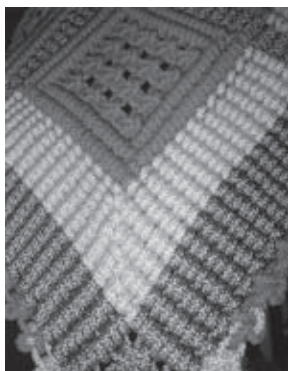


COVER PHOTOGRAPH

Close up detail of macrame work of Geoffrey Budworth at the Silver Jubilee, Fareham.

Back Cover

Highly skilled lace work from Europa Chang Dawson



Features

8 John Halifax acquaints us with more on the Single Strand Matthew walker Ring Knot

9 Knot coverings can finish a job nicely. **Thomas Simpson** describes his method

16 The symmetrical star knot can be made from a single strand as **Graham macLachlan** explains

20 **Jack Fidspike** resurrects a very useful method of applying tension with cord and rope

22 A selection of the exhibits shown at the Silver Jubilee celebrations

29 Ropework courses in the Boy Scouts of America as **Joe Bates** explains

32 'Knut Canute' continues his philosophical journey through knots

33 **Rob Chisnall** concludes his series on carabiner hitches



Regulars

- 5** Knots from the Mouse Pad
- 6** President's Letter
- 14** Knotmaster
- 45** Postbag

EDITOR

Colin Grundy
Tel: 07946841157
Email:
knotting_matters@btinternet.com

HON. SECRETARY

David Walker
Tel: 01244 682117
Email: dwfenders@yahoo.co.uk

MEMBERSHIP SECRETARY

Bruce Turley
Tel: 0121 453 4124
Email:
bruce.turley@blueyonder.co.uk

PRESIDENT

Ken Yalden
Tel: 02392 259280
Email:
ken.yalden@igkt.freereserve.co.uk

GUILD POSTAL ADDRESS

for all correspondence
PO Box 3540
Chester, CH1 9FU, England

Annual Subscription Rates

Juniors	£5
Adults	£23
Families	£27
Group	£10

Corporate - by arrangement
The IGKT is a UK Registered Charity
No. 802153

PRINTED BY

Gipping Press Ltd.
Needham Market
Tel: 01449 721599
Fax: 01499 721372

ISSN 0959-2881

Knot Tyer Honoured by the Queen

HRH Queen Elizabeth II in the 2007 Queen's Birthday Honours List has honoured Des Pawson, a founder member of the International Guild of Knot Tyers.

Des, described as a Professional Knot Tier and Rope Maker in the *London Gazette* was awarded the MBE (Member of the Order of the British Empire) for services to the rope industry.

In a newspaper interview to the *Suffolk Evening Star*, Des said, "I am really pleased. All my life ropes have been my passion while I have felt they have been under-rated by museums and the public in general - this award recognises knots, sailors' ropework and rope as essential and important to be understood and studied as part of the development of civilisation".

As far as we are aware, this is the first time that the honour has been awarded for knot tying.

Congratulations to Des on behalf of the entire Guild.

KM Editor: I suppose the question in everyone's mind is - did Des wear his red hat when receiving the award at Buckingham Palace?

Dear fellow knot tyers

As many of you will know the Queen has honoured me with an MBE [Member of the British Empire] for services to the Rope Industry.

This came as a complete surprise. I knew nothing about how this could have come about. I have discovered that somebody must have got together with at least six others and proposed to the Prime Minister's office that I should be considered. I feel certain that this must be people within the International Guild of Knot Tyers; I thank them for starting the process.

But I understand that, when a proposal is made, it then has to go through two or three committees before being recommended to the Queen. The fact that a knot tyer should get through this process and succeed gives the treatment of knots and ropework a mark of seriousness and respect. It is this that pleases me most. I have strived all my life for the world of knots and ropework to be treated properly. I hope that you will share the pride that knots and ropework is being treated seriously. The MBE is not just mine, but I hope enhances the standing of the IGKT and the importance of knots and ropework.

I shall do my best to use my MBE to enhance the stature of knots, ropework and the International Guild of Knot Tyers.

Des Pawson MBE

Col's Comment

By the time you read this, the summer season of shows (at least those not cancelled due to weather) will be over. It is a great way to show the public what we knot tyers can do, and a good way to recruit new members.

You don't have to be an expert; there is usually someone on hand to give advice on a knot if you don't know. In addition it is also a good social occasion for Guild members. If you have already joined us on a stand, well done. If not make a resolution to come and say hello, stay for a while and get out a piece of cord.

See you next year.



Knots from the Mousepad

Things seem to be very quiet on the knotting scene now that the 25th birthday bash is over, but I can assure you that the back room boys and lady are working very hard. It's that event that comes round every couple of years. It's the thing that causes many sleepless nights. It's the publication that forces many knot tyers to put pen to paper. Yes you are right; it's the time to put together the new membership handbook. You can play your part, if your details are not correct tell me NOW, not when it's falling on your doorstep, it's too late then. If you have any ideas on how we should present it or what information we should include, please tell me. We need your help.

A few days ago a member got in touch with me with the idea of the Guild getting involved in teaching knotting to the visually disabled. I think it's an ambitious idea and I think many Guild members might like to get involved. If you would like to get involved, whether hands on or giving ideas please contact me, I will put all the feedback together and present it to the Council as an agenda item for consideration.

One last piece before I go, from time to time I receive requests for members who give talks and demo's for W.I. groups etc, if you are one of these members please send me your details, including contact details, the distance you are willing to travel, how much you want for expense's and how far you are willing to travel.

Happy Knotting,
Dave Walker

President's Letter

In my last letter I wished you all a good summer season of shows. Well so far the Solent area has been mainly cold and wet, whilst we have knot tyers living on the Mediterranean coast having a massive heat wave and elsewhere global warming gives us all the extremes of topsey turvy weather. So, I would ask all knot tyers to raise their eyes higher and not only think about the next 25 years of IGKT but also to look at what we are all doing to our world.

On to lighter matters, I was very impressed with the 'Silver Jubilee' copy of *Knotting Matters*; it was almost as if I was there again. Just to fine tune a couple of points, it was quoted that the Mayor opened the show by untying a 'special reef knot' this in fact was a Josephine knot. Also just in case my saying is misunderstood, I usually say, "rope ends off the table until after the soup course", Which is just my overactive mind of rope ends being flicked through the brown Windsor by an over enthusiastic knot tyer and splashing the innocent spectator.

Further to the Silver Jubilee Celebrations, I now have a professionally made DVD of the event and this will be on sale at £10 plus P&P. Linda & Bruce Turley will take your orders however this is separate and will not be part of the Supplies Sec. remit, so please make sure you contact the correct person. As I said this DVD is a professional production, however the usual fees have been waved, so we are being given this at a special price. I think it will be good for those who attended as a keepsake as it shows lots of faces and it will also be a good way of

finding out what we got up to if you were not there.

The Solent Branch, having warmed to the task of organising 2K7 was in good form for their usual shows of the season. For those who do not live in the UK, the reason we always talk about the weather is because the most consistent thing in this country is the fact that the weather is unpredictable. Therefore when we say "Good Morning" it is because we are amazed that it is and that was the case at our show on Butser Hill when we had two consistent days of blue skies, where our two young members Josh Peak and my Aby were working the crowds with enthusiasm doing cats cradles, flying bowlines, and Jeff Wyatt's rope making machine. Two days later we were off, by invitation, to the Bournemouth Caledonian Society Scottish Spectacular helping them to celebrate a 100 years. The last Hon Sec. passed on the invitation from the IGKT web site, to the Solent Branch, and the task was to teach net making, tying the Ossel knot and the Ossel hitch, because of the fishery connections on the East coast of Scotland. So as knot tyers are we going to say no? I name the knots in my letter so the avid's, can look them up tie one and be part of the fun. During the day there were over 200 hundred school kids attending some were also participating in the dancing of Scottish reels etc, so this ensured we had a steady stream of young folk. Bob Pearce looked a little like the Pied Piper of Hamelin, with a trail of kids following him around whilst he did his flying bowlines and dropped figure of eight knots. One young man who had

been commanded to get back with his class on time as he was dancing in the next set was heard to say to Bob, "I have not finished yet, do not go away, I will be back." And he was with all his mates!

As well as the Caledonian society making 100 years so has the Scout Movement, and again the Solent Branch had an invitation. This time it was Scouts tying 100 knots, and they contacted the Hon Sec. so off we went to Eastleigh to oversee the event, there is hope when you see young folk as enthusiastic about knots as we are. More notes on knots, the Scout scarf (neckerchief) for the 100 years has a friendship knot tied at the bottom, this is the square knot, page 19 of Spencer's, *Knots Splices & Fancywork*. As part of the 100 years of Scouting there will be the 21st World Jamboree, and two of our long-standing IGKT members are funding themselves to represent the Guild, they are Vice President Nigel Harding and Charlie Smith. Good luck to you both and any others who attend, I do hope the KM editor gets some feed back on the Scouts and their 100 years.

I know you Scouts are out there because some of you looked at my Scout photos during 2K7, so for all involved I send a big thank you.

As to a thank you, none come much bigger than this, one of our founder members Des Pawson has been acknowledged in the Queens Birthday Honours List and awarded the MBE, for his contribution to "Knot Tying and Rope Work."

Well done Des and 'Bravo from all of us. Leaving you with the problem of when you go to Buckingham Palace in your top hat and tails, where will you put your red hat?

Speaking of top hats and knots, my Lesley had to buy a big hat recently as we had been invited to France, to attend the wedding of Patrick Lefour (IGKT France) to his lovely lady, Nolwenn. They were to tie the knot in the Cathedral of Saint Vincent in Saint Malo, also attending the ceremony was Graham macLachlan (President IGKT France) and of course we had time for a brief chat, it is always good to catch up on Guild issues.

I shall finish here otherwise Colin the editor will be on my tail for taking up too much space in his excellent magazine.

Yours Aye
Ken Yalden

Neotony from Knots?

'But imagine that, along with making chipped-stone tools, one genus of hominid appropriates the looped entrails of a dead animal, or learns to tie a simple knot, and invents a sling ... In its sling, the hominid child can now hip-ride ... it is no longer important for the infant to be able to hang on ... Although ... the hominid child cannot be born with a big head (and thus with a large initial brain capacity), it can now be born under-developed. That is to say, the sling allows fetuses to be born in an ever more ontogenetically retarded state. This trend, which humans do indeed display, is called neotony.'

(an extract from 'The Human Brain as a Cultural Artifact', an essay by archaeologist and author Timothy Taylor, included in the book *What is your Dangerous Idea?* edited by John Brockman and published [GB 2006] by Simon & Schuster)

Addendum

Single Strand Matthew Walker Ring Knots

These are made from overhand knots, double overhand knots (blood knots), and treble/triple overhand knots (the French needlework knot) and follow the 'code of over two under two' for that lovely spiral effect finish.

The simple overhand knot principle is relatively easy round your finger or a diameter up to 25mm/1 inch. But the blood knot and triple overhand knot/French knot can be very tricky if you don't lay it round the loop of the knot correctly on the second ply follow round. It gets even worse as the circumference of your chosen structure increases in size. It took me over an hour to achieve just one blood knot, Matthew Walker ring knot on a 35mm dia./11 cm circumference just recently on the actual structure i.e. a length of plastic waste pipe for a ropework rigging model I am currently making. In the end it became so galling that I started it around two fingers then enlarged it and slipped it on the chosen structure.

However all is not lost. A more simple and equally effective alternative may well suffice and is just as pleasing.

Try the same basic concept of the overhand, blood and French triple knot but this time follow it round into two or three ply by just keeping to the right side of the lay of the knot as you follow round the lay but the code this time is 'over one, under one'. Quite simple really!

Again I never cease to wonder why this has never been depicted before by generations of knots tyers. We humans

are sometimes so blind to the obvious! But as always I stand to be corrected and if anyone has knowledge of this concept of ring knots, please speak up. The ancients were nearly there with their golden spiral torcs and rings but they were mostly multi-layer devices and generally cruder!

John Halifax

The String Zoo & The Cord Zodiac

A CD by
Frank Brown
(with help from Ron Hacker)

The latest publications from the author of *The Rope Menagerie*.

Descriptions of how to build Penguins and Pandas, Spiders and Scorpions, Cats and Koalas and more, plus all the figures of the zodiac from rope.

Available in exchange for trade items to the approximate value of \$Aus 10
frank_brown@bigpond.com

Ashley #2222: Variations on a Knot

Thomas Simpson.



This knot, a single strand Turk's head variant, forms a hemispherical knob knot, where a six-bight, open-ended perimeter is required at one end and a three-bight, closed interweave at the other. The knot is more accommodating when commenced from the outer perimeter (as above), rather than starting from the knot's centre as depicted in *The Ashley Book of Knots*. The single strand can be followed round as many times as required - typically forming a two, three, or four-ply knot. The knot contains 78 under/overs (39 in the actual construction).

After a few reconnoitring traverses around the knot's structure, it can be constructed as drawn, in a flat, two-dimensional manner; mind, it's advisable to have 20 or so pins to hand, to pin together what one considers the more strategic crossing points, which assist in holding the knot's shape. A specialist

pin-board isn't a requirement for this knot's construction.

Many will find the above construction method a touch too muddling. A far more disciplined and orderly construction results when the knot's assembled on a cylindrical former, aided by a Mercator projection based diagram and it's accompanying step sequence instructions.

Odd numbers (Fig. 2), 1-11, indicate the six bottom (open) bight's and the circumference of the knot on a cylindrical former. The overlap at either end helps one to see where the working strand is coming from and going to. Even numbers, 2-4-6, are the three outer and inner, top (closed) centre bights. Construction proceeds left to right (diagonally), SW-NE and NW-SE. To hold the bights in position I always favour the use of elastic bands - three required in this instance.

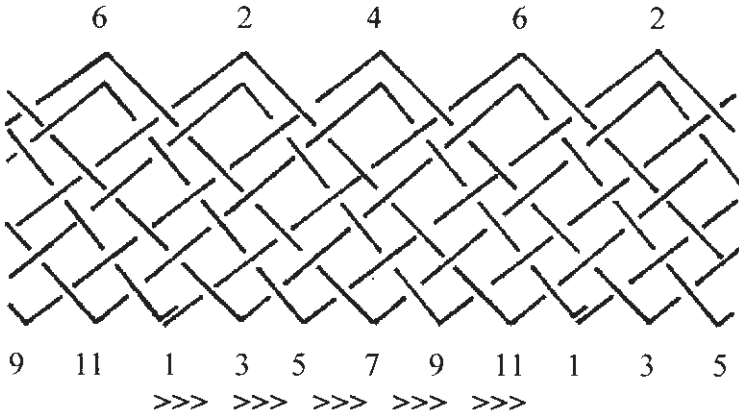


Fig. 2 - Knot laid out in a Mercator projection diagram.

Step sequence builder to lay down the over/unders.

- 1 bottom 1 - outer 6..... nil (crossings).
- 2 outer 6 - bottom 7..... over
- 3 bottom 7 - inner 2..... over
- 4 inner 2 - bottom 9..... under over
- 5 bottom 9 - outer 4..... under over
- 6 outer 4 - bottom 3..... over under over over (start strand).
- 7 bottom 3 - inner 6..... over under over
- 8 inner 6 - bottom 5..... over under under over
- 9 bottom 5 - outer 2..... under over under over under
- 10 outer 2 - bottom 11.... over over under over under over
- 11 bottom 11- inner 4..... over under over under over
- 12 inner 4 - bottom 1..... under over under over under over

Then alongside the start strand (1) and under to complete the knot.

A word of warning: select your elastic bands carefully. Believe it or not, correct elastic bands can mean the difference between a smooth and comfortable transit of the step sequence, or a possible expletive provoking one. Having completed the step sequence - discard the elastic bands. Then, either opt to follow round once more (adding extra bulk to the knot) or directly transfer the knot to its intended permanent location, where the top (centre) bights require very little cajoling to assume pole position on top of the knot. The knot can then be completed

with a personalised tie-down.

A guide to material quantities: the circumference of the object to be covered when multiplied by a factor of ten (for each full follow round of the knot) equals the actual amount of material in the completed knot; e.g., 4 inch circumference x 30 (a three-ply knot) = 120 inches/10 feet. To make up the knot from its start I would allow twice this amount - 20 feet - although a truer amount would be around 16-17 feet. Twice as much is easier to remember than 1.6 or 1.7 times.

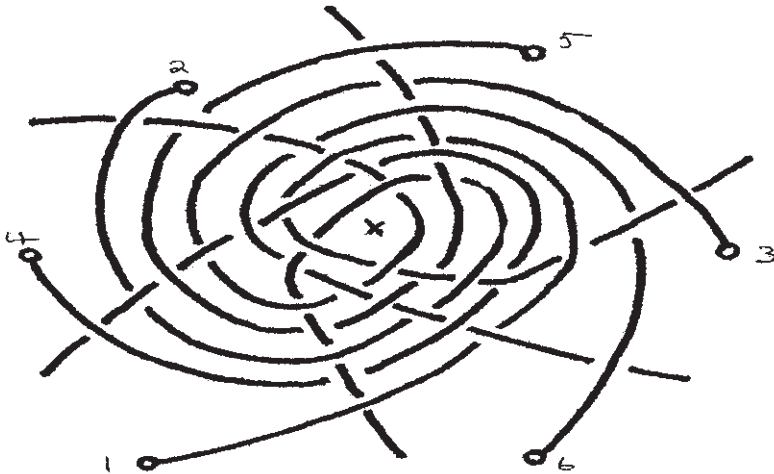


Fig. 3 - Six-strand elongated knob knot diagram.

Another variation commences as a six-strand right crown knot and when overlaid on top of a six-strand right wall knot continues on to form an elongated knob knot on an appropriate six-strand ropework project - for example - a six-strand continuous bell rope. It consists of three-strands over/under 14: three-strands over/under 12 - totalling 78 over/unders.

The diagram shows the loosely constructed knot sitting on a paper or card lap former. The six "O's", around the periphery, represent the six strands entering (in consecutive order) through holes punched in the paper/card lap former from the six-strand right wall knot below. Please note that the diagram strand numbers bear no relationship to the consecutive order of the wall knot strands coming from below -- they are solely to help out with strand identity on the lap former.

To help in clarifying the knot's construction it's described in one of its likely working scenarios, allowing an overview of the bigger picture. Say, for instance, a six-strand continuous bell rope is nearing completion, and all that's

now required is the addition of a terminal knob knot. After assuming a comfortable sitting position, place the bell rope (upside down) lightly held between the thighs/knees. Fan out the six working strands from the base of the stem (3 feet/90cm per strand, will easily complete a three or four-ply elongated knob knot); form a (not too tight) six-strand right wall knot (anticlockwise) on the stem's base. One should have to hand a paper or card lap former, with six holes punched through from the underside, the holes roughly circling the periphery of the lap former, as depicted in the diagram. With the lap former laid across the thighs, roughly centred above the wall knot, feed the six strands (in their consecutive wall knot order) up through the holes.

My lap formers tend to be: A4 (11 x 8 inches) used sheets of paper; pages from tabloid size newspapers; or, for a slightly firmer support, I can recommend the light cardboard used in the manufacture of breakfast cereal boxes. Nothing too thick, though, as the lap former has to be, afterwards, cut away from between the two knots.

Now - while constantly crosschecking back and forth between diagram and lap former -start laying out the strands on the former. First, 1, 2 and 3 (in any order), they form the all important centre triangle; then, 4, 5 and 6 (again, in any order). Be continuously aware of the centre triangle's position (even before it's fully formed), frequently tweak it, so it's instantly recognisable at all times - its location is the paramount pivotal reference point, used to correctly position all the strands' crossing points.

It's equally important to maintain the spider web layout as the knot progresses, owing to a tendency for the knot to creep towards the centre. Take your time duplicating the pattern on the lap former, work methodically with a light touch, if concentration flags, take a break. Laying down the strands can be a touch brain numbing - particularly a first time. But stick with it and you'll get there!

In making a first-time attempt, a few pins may help you on your way - especially for forming and holding the centre triangle. Make sure the pins are not too long; be careful not to stick them in your legs!

At the knot's completion spend some time tidying up; check all six strands to ascertain they are all over one/under one. If they are not - don't be too dejected - sometimes any offending strands can be reworked as they lie in their present locations. If this fails you'll have to start again,

Next, carefully cut away the lap former; then, while the two knots are piggybacked, gently work some of the loose strand material (between the two knots) through to the working strands - bringing the two knots closer together. It's also time to place the heart within the knot's skeletal framework. Make sure the centre triangle is located centrally on the temporary top of the knot; gently attempt

to tweak the strands into a rudimentary semblance of order around the knot - this is the moment when your work becomes recognisable as a knob knot. At this stage there may still be a small separation between the two knots; again, work any slack through the knot - so the two knots are reasonably close together.

Now for the follow-round process (strand paralleling) to seamlessly merge the two parts of the knot. Hold our hypothetical bellrope and fledgling knob knot (still upside down) at eye level; check that all the working strands are hanging free. Looking at the knot, you will notice that each strand (within view) has traversed diagonally downwards to the right, through the knot. Choose any hanging strand as it exits the knot and lookout for its companion bight in the wall knot (which you wish to follow); it's in close proximity, just below and usually a little to the right. The hanging strand's natural progression (downwards and to the right) leads directly towards it. In following round, one may follow either side of the wall knot bight strand (above or below). This description passes above, then follows it under the wall bight immediately to its right, and then continues paralleling it, upwards through the main knot (keeping to the left of the lead strand) - slavishly copy every over and under on the way -until it again exits the main knot. To recap: the hanging working strand can follow either side of the wall knot bight strand, but whichever side is chosen, all companion strands will follow the same side for uniformity.

At the exit point just mentioned, one could pick up the relevant hanging strand and follow round from here, but from experience I would advise a return (to the left) to where the first follow round started and pick up the hanging strand immediately to the left, for the next follow-round. Repeat this pick up



The fids' handgrips are covered with single-stand hemispherical knob knots, constructed by the Mercator projection method. The three-ply knot is constructed as described in the article.

The two-ply knot's size is deceiving: it's actually the next larger size in a series constructed from a basic knot of 102 under/overs and not the Ashley related knot of 78 under/overs.

The two bellropes are of continuous eight-strand construction and terminate in eight-strand versions of a six-strand elongated knob knot, similar (but not exactly the same) as the one described in the article. The knob knots have a 6:5 length/width ratio.

procedure with all the strands, and this should thwart the possibility of accidentally following round a wrong wall knot bight strand.

During the follow-round traverses you will start encountering two strands coming from a strand exit point - you haven't made an error - the follow-round strand to use is the one directly alongside (nearest) the wall bight strand. Or, as a secondary guide, the longer of the two strands is the correct one (the shorter strand has already circled the knot in this round of traverses). Repeat the follow-rounds as many times as it requires to cover the heart and fill in the knob knot. Don't be in a hurry to complete the tie-down around the knot - to achieve that much sort after "uniform tension" - it's better to go round thirty times than ten.

The strand ends can be buried in the vicinity of where they finish, or, alternatively, they can be led under the wall knot and brought up alongside the stem of the hypothetical bellrope, where they are tightly compressed by the wall knot section of the knob knot; here they can be carefully cut off and buried after the knot's completion.

It has previously been mentioned that this particular knot pattern is for an elongated knob knot, so an appropriate heart is required; a heart of spherical shape (if used) would cause the strands to crowd or bunch together towards the poles.

Wondering where the next heart is coming from? A sound “utility” heart can be fashioned from sheets of kitchen-roll paper soaked in water. Squeeze out excess water, then form and seriously pound the sheets into the required size and shape, preferably using a mallet, or something similar. Let the heart dry out naturally, or in a warm oven. When fully dried out the compressed paper will be found to have set reassuringly hard. In certain circumstances the heart may be loaded with an optional weight. For elongated hearts, I often aim for a 6:5 length/width ratio.

On file in the rope-locker I have another eight associated knob knot pattern cards (4 six-strand and 4 eight-strand) which all make up into stylish terminal knob knots; they all have fewer over/unders, making them easier to construct than this Ashley related knob knot. They range in shape from regular spherical to elongated spherical knob knots, covering a full gamut of options. The title of this article predetermined the Ashley related knot’s inclusion; I would have really preferred

to describe a simpler example. I hope to include the other six and eight strand knob knot patterns in a follow-up article.

Readers may possibly be wondering at the mat’s non-appearance; #2222 has never appealed to me as a mat. Referring to my notes from the 1960s, they state: “Good elongated knob knot, but makes a lousy mat.” I did make a mat whilst writing this article and I still can’t rate it better than fair. In its single strand construction at the top of the article the knot looks great, but once it reaches three-ply (in two-dimensional mat construction) it just looks very ordinary. If anyone’s on the lookout for a “good looking” mat, they don’t have to look further than Ashley #2269-71; it’s very aesthetic, and its versatility is such that it can be constructed to any size, with any number of perimeter bights.

In closing, I’d just like to point out that there’s no hard and fast rule about laying these knots up right-handed. Along with the majority of left-handers I’m ambidextrous in knot tying, and have, on occasion, constructed them left-handed. 🌀

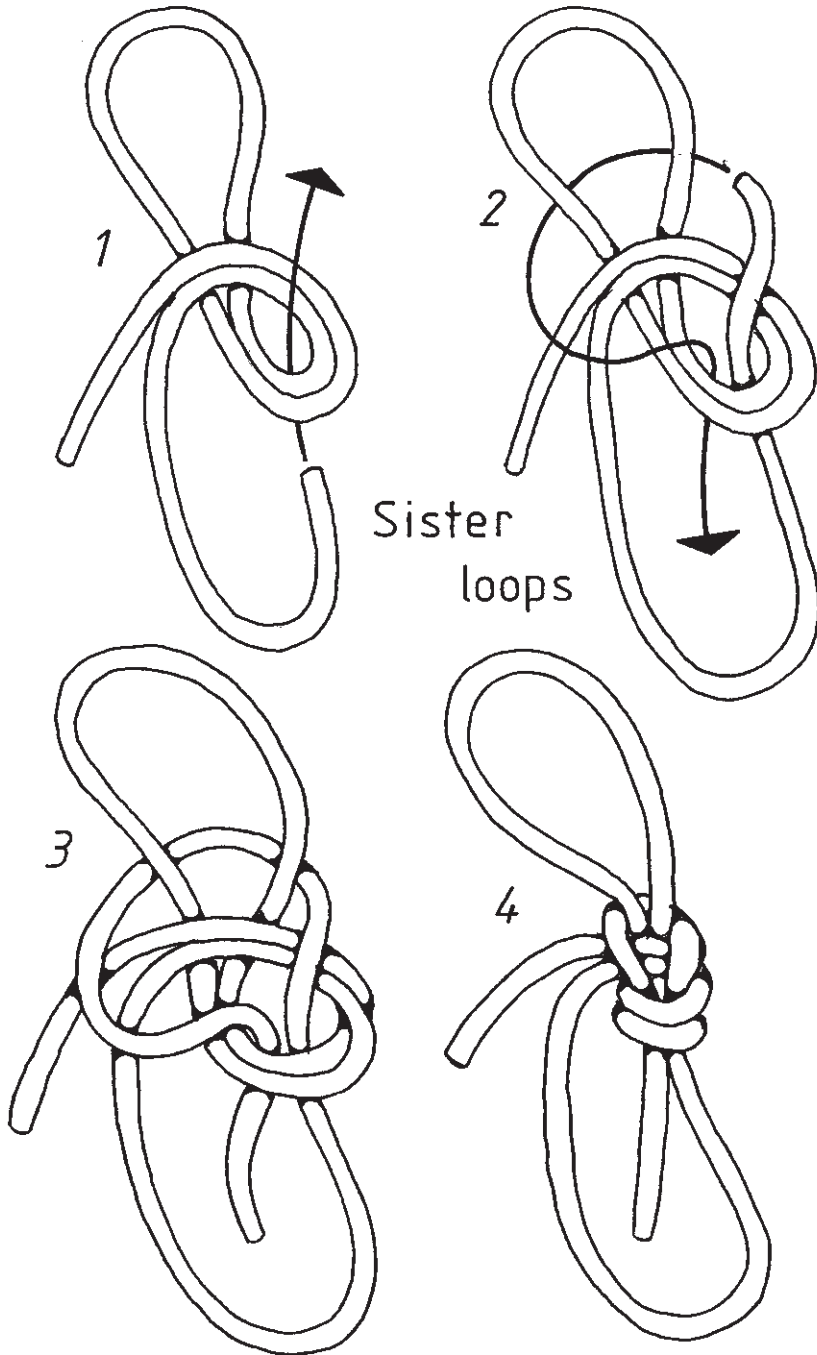
Knotmaster Series No. 34

‘Knotting ventured, knotting gained.’

Sister loops

*For what, do you think, this odd little cordage contrivance might be used? It is fun to tie. Knotmaster found it in that worthwhile publication *A Fresh Approach to Knotting and Ropework* (1992) by Guild member Charles Warner, of New South Wales, Australia.*

Make a bight in a length of cord and wrap it around to form an underhand loop (fig. 1). Tuck the unused end up through the loop, take it around behind the tongue of the bight, and put it back down through the loop beside itself (fig. 2, 3). Tighten (fig. 4).





Method for Making a Single Strand Star Knot

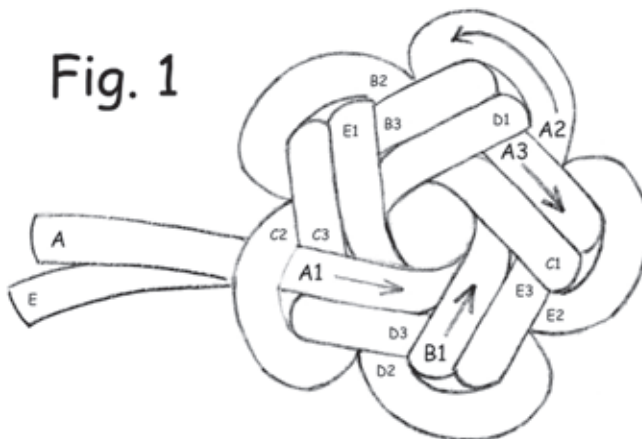
Graham macLachlan

Last summer I had a little free time to devote to a project that I had wanted to do for some time : make a single strand star knot. Ashley does mention it in his chapter about Turk's heads (#1396) but it is a summary description and his drawing doesn't highlight the motif of

the knot, that repetitive pattern I need to fix in my mind so I can tie the knot. So, for what it is worth, here is my interpretation of a single strand star knot.

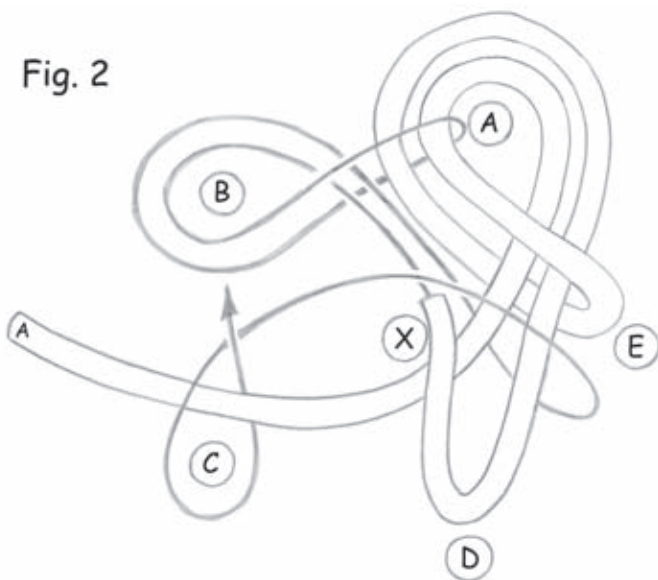
First of all, the knot is not symmetrical, the two faces are different : one side shows the typical star knot shape (fig.3)

with a 'sharp' pentagonal centre, the other side is more rounded (fig.1). The reason for this difference is the relationship between lines A1, B1, C1, D1, E1 and the loops A2, B2, C2, D2, E2. In figure 1, the strand A1 leads to A2 but on the other face (fig.3) the equivalent to A1 goes to E2.



As for other jobs, such as splicing, you have to decide which way up you want to do the knot to avoid getting in a muddle. I prefer to make the knot with the rounded side facing upwards (fig.1). Also, I find the knot is easier to 'control' if it is made on a template, that is five nails driven into a wooden board

Fig. 2



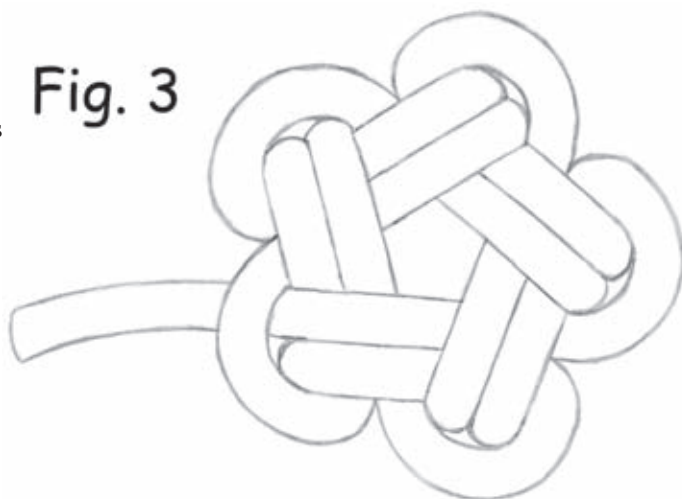
marking the five points of a pentagon (fig.2 : A, B, C, D, E) and a sixth nail marking the centre (fig.2 : X). This is a great help as you can tie off with sail twine or something similar the different parts of the knot as you go along. The motif of the knot is visible in figure 2, it is the 'white' strand that begins at A and ends alongside the centre X : A enters the pentagon between nails B and C ; it leads round X in an anticlockwise direction ; goes round A ; passes over itself ; touches nail E ; retraces its steps ; goes back round A ; passes

through the bight created by itself at E ; and finishes its voyage at D ; from whence the motif repeats itself (B1 on fig.1).

The drawing is for a five pointed star, but I suppose you can choose any number above three.

One last tip, tighten the knot around a cylinder such as a fid or a piece of dowel to get a nice centre hole on the rounded side.

Fig. 3



Book Reviews

The Higher Power Of Lucky

by Susan Patron,
illustrated by Matt Phelan
published (2006) by
Atheneum Books for
Young Readers
ISBN-13:978-1-4169-
0194-5
ISBN-10:
1-4169-0194-9

The author of this hardback works in the Los Angeles Public Library, where she is the Collection Development Manager for Juvenile Materials. She is also an IGKT member. This is her latest book and it won the John Newbery Medal, which is awarded annually by the American Library Association (children's librarians section), for the most distinguished contribution to American literature for children.

Lucky is a 10-year-old girl who enjoys life with her French guardian Brigitte in a trailer close to the defunct Californian silver mines of Hard Pan (population 43) on the edge of the Mojave Desert. Significant to her

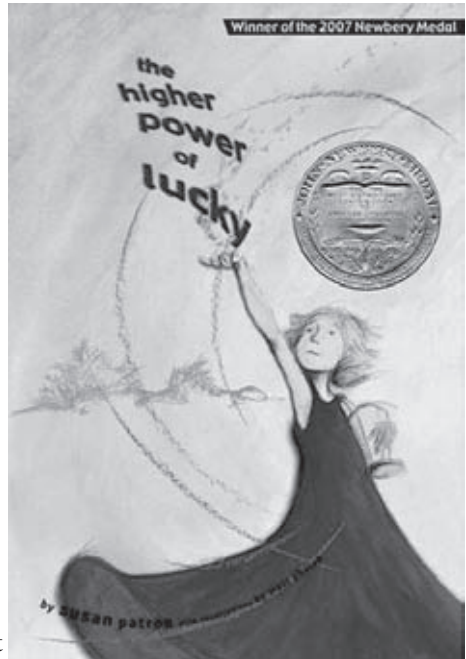
are a dog called HMS Beagle, her backpack survival kit, and a boy named Lincoln who ties complicated knots in string, and for whom the highlight of each

month is the latest issue of 'Knot News'. He is saving his pocket money so that one day he might travel to England for an annual convention of the International Guild of Knot Tyers.

Other influences include: Short Sammy (whose home is a disused water tank); Miles, a 5-year-old cared for by his grandmother (unaware that his mother is in jail for selling dope); Lucky's errant father (who sends inadequate maintenance cheques); the periodic arrival of free community food parcels; and an urn containing the cremated ashes of her biological mother (who died an

accidental death by electrocution).

This is a delightful account of a feisty female child. Lucky aspires to become a world-famous scientist, but also hopes to discover the 'higher power' she has heard mentioned while eavesdropping on the meetings of Alcoholics & Smokers Anonymous held in the local Found Object Wind Chime Museum and Visitor Centre. This she believes would enable her to gain control of her life. She worries, however, that Brigitte is homesick and will one day return to France, leaving her to be taken into care by the authorities. So she runs



away ... and learns that only when a person hits rock bottom might she find that ineffable power.

This is the only children's book of fiction so far to feature the IGKT and knots. KM readers may wish to buy it for that reason alone. Because it also deals with Lucky's perception of topics as diverse as: human relationships; idiomatic French; natural history; parsley; addiction; punctuation; and a dog's scrotum - it is also an instructive and inspiring story for maturing young people aged from about 9 to 13 years of age (and some adults).

G.B.

Braiding

Ron Edwards

Over the last year I have looked over some of the recent entries into the collection of books on braiding. Some I find to be excellent, some quite awful.

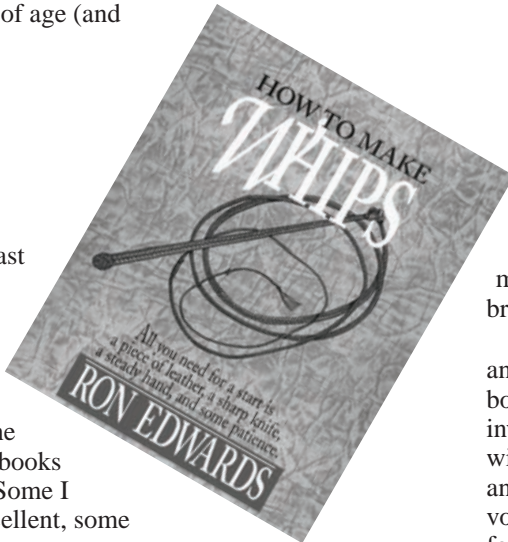
The excellent ones are by Ron Edwards (Ramskull Press). He has several volumes out now, and each deals with a specific aspect, e.g. round braids, flat braids,

The good news & bad news

The bad news is that *Knotty Potty* - the limited edition of poems, fancifully credited to Guild doyenne and poetess 'Jennifer Wren', which was produced specifically to celebrate the IGKT's silver jubilee in 2007 - sold a feeble 12 copies at Fareham. Do Guild members really not appreciate the celebration of knots in words; or were you merely unaware that this amusing publication (in fact composed entirely by our own Geoffrey Budworth) was available?

The good news, for anyone in the UK who might like one or more of these booklets, is that remaining copies may now be obtained directly from him ... before, that is, they go into the rubbish skip for recycling.

Price: £5.50 each (including packing & postage)



whipmaking, etc. Directions and illustrations are quite nice - his very warm and personal style makes for easy reading - and he truly makes the effort to

share a wealth of knowledge without any of the confusion.

He succeeds; there is much in his work for braiders at all levels.

If you enjoy braiding and take it seriously, his books will be a rewarding investment. The Internet will allow you to see and choose which of his volumes will work best for you. If on the other hand, you are looking for some of the more awful entries into the braiding literature, contact me and I will advise you on those authors as well.

Mike Storch

Tourniquet Techniques

'Jack Fidspike'

(French: *Tourniquet* - turnstile, swivel, revolving stand)

First Aid

In English the word 'tourniquet' generally refers to a binding used to stem grievous blood flow from a wounded limb. Clifford Ashley in his *Book of Knots* shows [A#1258] how to make such a ligature with a reef-knotted strip of cloth, located either above the wound (for a bleeding artery) or below it (for a vein), padded where it would otherwise pinch the patient's skin. A tourniquet must be applied in strict accordance with current 1st Aid advice and guidance, as prolonged constriction of the circulation can itself be injurious; but, where fatal loss of blood is likely, failure to act promptly would be worse.

[A#1259 - not illustrated here - also mentions using tourniquets to tighten rope lashings for heavy logs, but does not go into detail.]

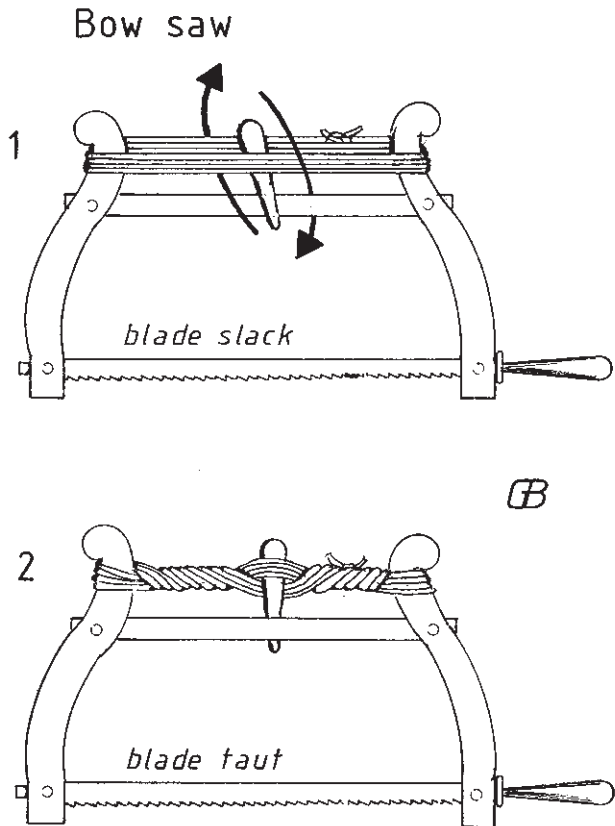
Bow saw

My father was a cabinet-maker by trade but he managed an antiques shop and, when he went out to auction sales, I would sneak into his workshop to

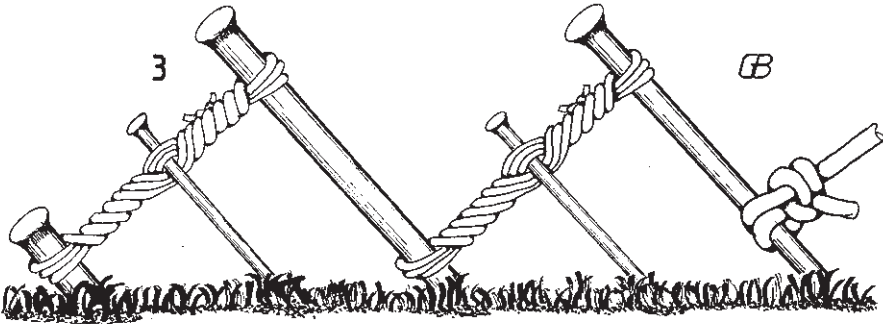
mess around with any tools I found there. My favourite was his bow-saw [1, 2], a loose-jointed wooden H-frame tensioned by twisting several turns of hard-laid cord with a stick. Simple, yet powerful, I can still recall how it creaked.

Stake anchors

Ashley features another tourniquet technique (A#1819) for reinforcing



Stake anchors



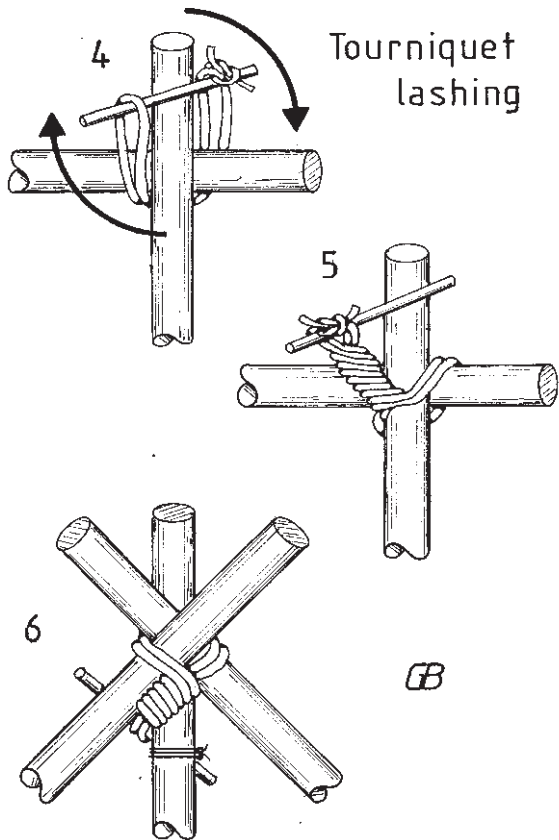
stake anchors [3]. When the required tension has been achieved, the lower part of each twist-stick is driven into the ground.

Innovative lashing

John Thurman described in his book *Pioneering Principles* (published: London, 1962) a tourniquet lashing [4, 5 and 6] which he devised when he was Camp Chief of Gilwell Park, the international venue for the Scout Association in England. It was a gimmick to impress crowds at demonstrations with the speedy erection of temporary structures by eliminating the time-consuming wrapping-&-frapping of orthodox lashings. He wrote;

‘This will shock purists, but I am unrepentant ... I hope it may shock some of you into trying it ... it does work!’

So try a tourniquet technique somehow or other, then let us all know what you did with it. ☺





Knot to be Missed - The Exhibits

Drawn fringe work by Gary Sessions (USA).

Photo - Christina Ruth

On the Wednesday of the IGKT Silver Jubilee at Fareham, Hampshire, knot tyers from around the world descended on Ferneham Hall, arms loaded with lots of knotty exhibits. This was the start of the public side of the weeklong celebrations.

The Solent Branch, to the chorus of “Where can I.....” and “I’m looking for.....” gently guided members to their allotted place and resolved any last minute problems. We had already been advised by Ken Yalden that all stands should be completed by 1100 hours, ready for the arrival of the media.

There was in excess of 26 separate displays, some by Guild branches and others by individual members. The knot work on show ranged from fine tatting and lace making, through to fenders and doorstops, from fine thread to Manila rope, from historical sailors ropework

to modern synthetic cord creations. All was of a high standard and gave a display that the Guild could be proud of.

In addition to members displays, there were also stands provided and staffed by organisations that can be said to have a loose affiliation to knot tying - Hampshire Spinners and Weavers, the Ring of Tatters and the Wessex Guild of Fly Dressers. Other displays of interest were the European Association of Ships-in-Bottles and a display on *HMS Victory*.

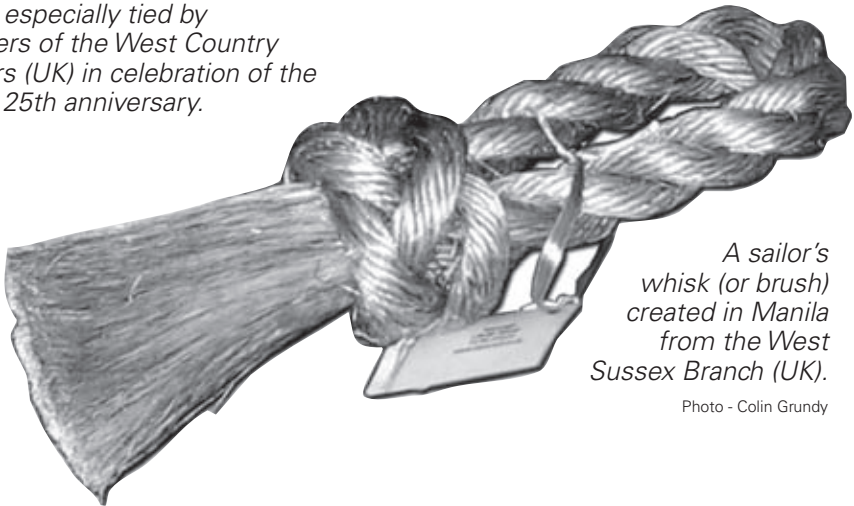
There was the Six Knot Challenge and a Learning Centre to answer knotty questions. Geoffrey Budworth displayed a range of books and publications by IGKT members. The Guild library was also available for use by members.

Read on to get a taste of the fine work on display.



Photo - Bruce Turley

A pair of silver framed knot boards especially tied by members of the West Country Knotters (UK) in celebration of the Guild's 25th anniversary.



A sailor's whisk (or brush) created in Manila from the West Sussex Branch (UK).

Photo - Colin Grundy

A spider's web design of narrowboat button fender, reproduced in cotton rope by Ken Nelson (UK).



Photo - Christina Ruth

Spherical knot coverings for earrings - Barry Brown (UK).



Photo - Bruce

A beautiful example of fly tying from Jon Bond, Wessex Guild of Fly Dressers (UK).

Photo - Bruce Turley

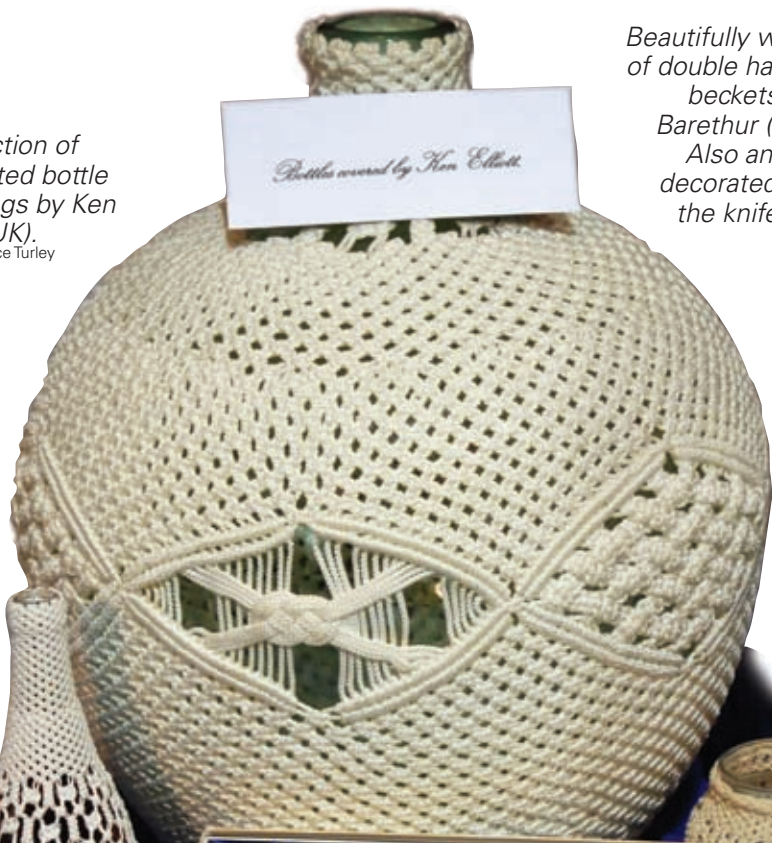


A selection of decorated bottle coverings by Ken Elliot (UK).

Photo - Bruce Turley

Beautifully worked pair of double handle chest becketts from Karl Barethur (Germany).

Also an intricately decorated handle to the knife depicting a whaling scene.



Please Do Not Touch



Photo - Colin Grundy



Photo - Willeke van der Ham



Table laid for two. Flat knots and Turk's heads by Bill Meakin (UK).

A selection of macramé hangers by Geoffrey Budworth (UK).

Photo - Christina Ruth



A ditty bag with decorative fringe work, sewn in canvas by Tony Doran (UK).

Geoffrey Budworth with Edgar the Escapologist Bear.



Photo - Christina Ruth



Photo - Colin Grundy

Hand turned wooden pot decorated with 3-part Turk's heads - Jonny Ekdahl (Sweden).

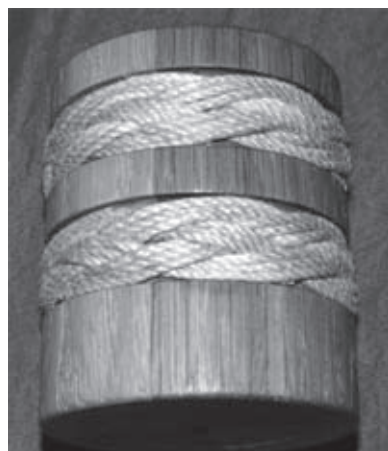


Photo - Christina Ruth

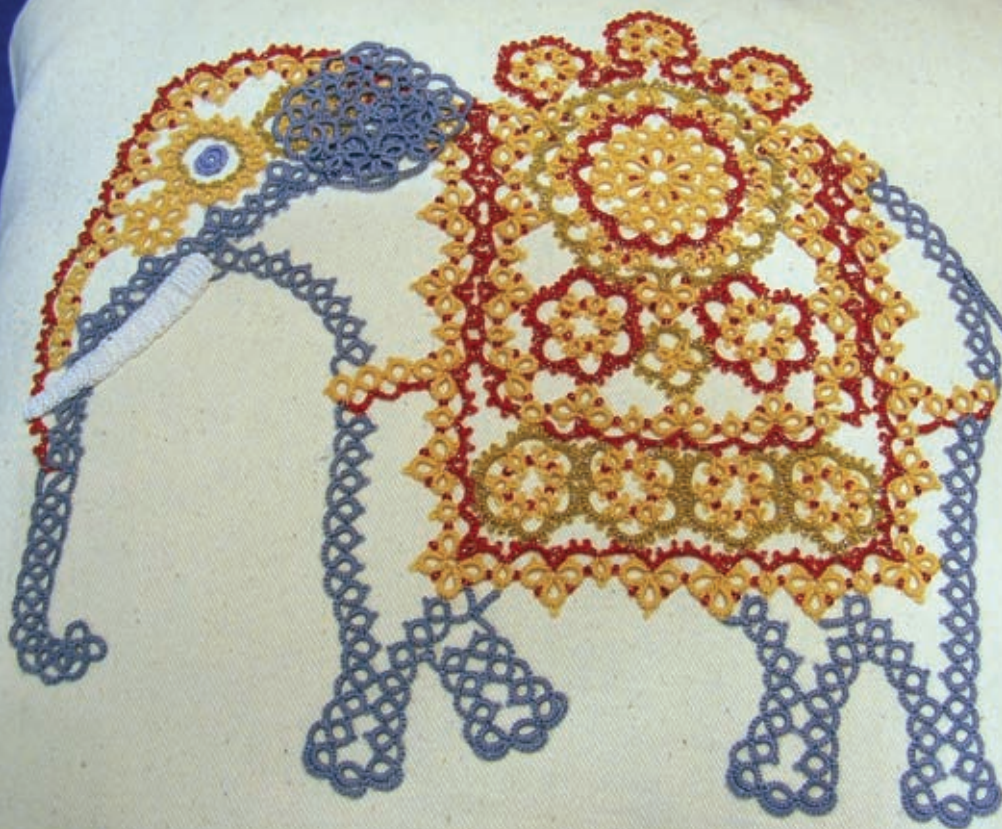
*A menagerie on your head.
Insects, animals and star
signs created by Frank Brown
(Australia).*

Photo - Christina Ruth



Photo - Christina Ruth

*Cushion intricately decorated by
tatting of an elephant - Ring of
Tatters (UK).*





One of the many exhibits on the stand of the European Association of Ships-in-Bottles.

Photo - Willeke van der Ham

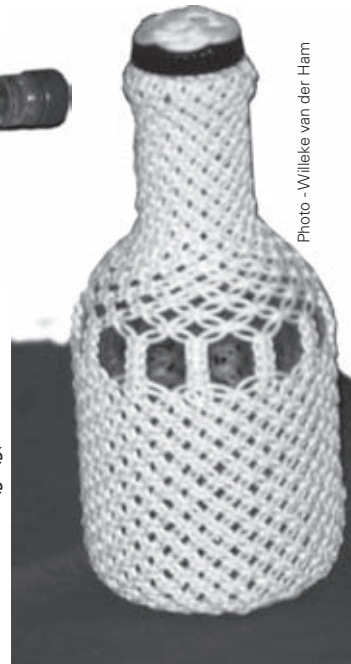


Photo - Willeke van der Ham

Bottle decorated in fine macramé work on the West Yorkshire Branch (UK) stand.

A selection of genuine antiques sailor's ditty bags on display from Des Pawson's Museum of Sailor's Ropework.



Photo - Willeke van der Ham

Marlinspike Skills Course

Joe Bates

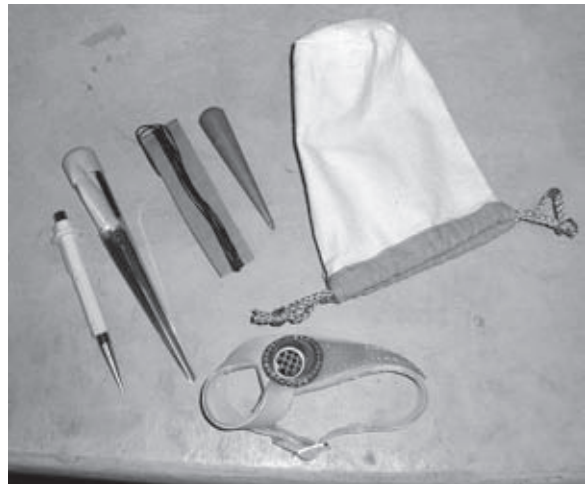


If it's the first full weekend in March and you're in central Indiana, USA, it must be time to learn some new knots. The Marlinspike Skills I & II courses (<http://www.marlinspikeskills.com/>) taught by Chief Knothead Gary Summers, #1 Assistant Knothead Eric Wickizer and a staff of seven others was held over the weekend of March 2nd-4th in Indianapolis, USA. We had sixteen students on the beginning course and seven in the advanced class. The learners came from seven councils and four states. The course is an official adult training course offered by the Crossroads of America Council of the Boy Scouts of America, but started ten years ago as simply a way to teach advanced knotting skills to adult Scout leaders. The course originally had only two instructors: Gary and Eric. Over the years, we have had 22 different staff members in Indiana and 12 in Illinois. We taught our 200th student this year. The course has now spread and is taught in Illinois with inquiries from other councils in other states.

The course is taught over three days, starting on Friday evening and finishing at noon on Sunday. It includes meals and housing with segregated facilities for men and women with further segregation for the snorers among us! I go a step further and sleep in a tent! (Keep in mind that March can be pretty cold in Indiana - 15 F (or -10 C) temperatures are not infrequent!) Meals are served cafeteria style and are a great time for us to get to know each other. The food is fantastic and plentiful. Gary promises that "if you don't gain weight during the weekend, it is your fault, not ours." Snacks and drinks are available all the time, as is music.

All of the staff have taken the course and have taught for a number of years for the most part. Almost all the current and many former staff members are Guild

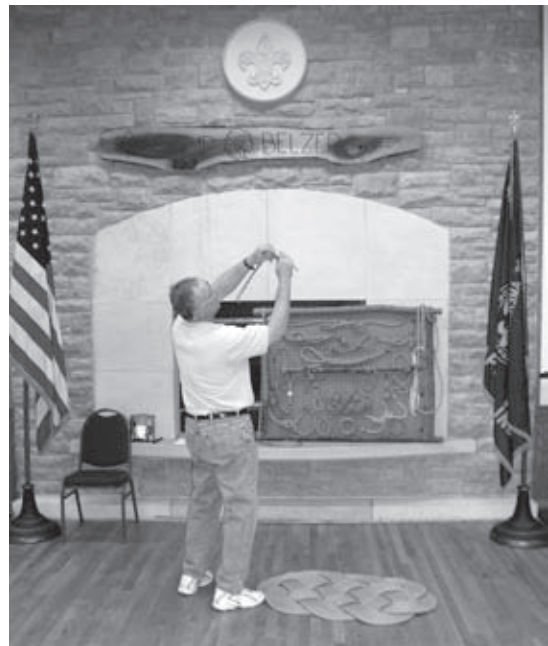
Each student is given a bag of tools to use during the course and can buy it if he or she wants at the end of the weekend



members. We all have a plethora of knot books, knot boards, tools and displays of our work as examples to spur interest and questions.

The format of the beginning course is very simple. One instructor shows the knot examples he or other staff members have tied, and how or where it might be used. He then demonstrates how to tie the knot once, twice or three times as the students watch. We threaten to (and do!) take away their supplies if they try to tie along with us until the demonstration phase is over! As we teach, we try to help the students learn to teach the knots themselves when they return to their Scouts, so we are not only teaching the knots, but also how to pass on that knowledge to a growing circle of Scouts and other Scouters. Learners are provided a bag on Friday night at the beginning of the course in which to place their completed knots. They take home every knot they tie.

When the instructor is ready, the staff spreads out into the group and he gives the go ahead for tying the knot. We typically have a three to one ratio of learners to staff, so we can watch to see who needs help and direct our efforts there. The teaching involves a lot of one-on-one help. The instructors have tied the knots long enough to anticipate the typical mistakes or to recognize new ones. Every once in a while, we



Gary teaches a knot as the students will see it in their own hands as they tie it.

hear, “Hey. Look at this!” from another instructor, though, and we are treated to some new knot or new way of goofing it up. It is all in good fun and we try to joke with each other and with the class to keep a light atmosphere. One staffer once referred to examples of the knots and said, “You can tie this as prissy, museum quality pieces like Eric’s or you can put it on your walking stick like Dave’s!” We don’t let up on each other!

The knots we tie are as simple as the constrictor knot which we use for temporary whipping (and as a starting point for the four by three Turk’s head) or as complicated as the star knot, which takes a long time to teach and to tie. We teach the star knot with large diameter, climbing style rope and when they have mastered that or at least gotten a successful star, we give them 1/8th inch diameter cord to tie and tighten. We

We have more books than most on the subject of knots, rope and fancy knot work.



teach all sorts of Turk's heads, splices, grommets, the ocean plait, sennits and stopper knots. We wrap the course up with a morning of hitches: French, Moku, St. Mary's and others and then on to doubles and triples for larger effects. We try to stoke the fires a little and show examples of how these knots are combined into lanyards, key fobs, or ditty bags to encourage them to do some fancy work on their own after they leave.

We use a variety of materials for the course including waxed whipping string, mason's twine, braided cord, and Manila rope in a variety of diameters. We typically go through almost a mile of material for each course. Gary and Eric are well known to the rope wholesalers in Indianapolis!

We always ask for the students to fill out a questionnaire so we can get feedback on how our teaching went, how learning progressed, what we did too much of and too little and what the students liked best or least. The spirit is always high as we break up to go our separate ways and the feedback is almost always very upbeat. Each student receives a certificate and a notebook with step-by-step instructions for all the knots we taught along with resource materials before they leave. Many students can't wait to come back and retake the course or move up to the advanced course. After they leave, the staff gathers and reads the comment sheets. Sometimes we alter the course based on the feedback, which is usually quite good. We critique ourselves and try to figure out what we could do to make the course better or easier to teach. We then try to implement that during staff training during the winter months before the course each year.

Students that show a great deal of interest and promise are invited to take the Marlinspike II course, which is based on advanced knots and stringing

them together into fancy work. There is minimal formal instruction during the advanced course. The staff are there to inspire, answer questions, direct, offer suggestions and encourage the students, but it is a weekend of pure pleasure in advanced knot work where the student can choose his or her own direction.

I always enjoy the weekend immensely. I am usually exhausted and pretty worthless the following Monday, but it always inspires me to dig into those knotting books and find something new I want to tie. I look forward to the teaching and to the new students. They are all different and they all bring a different set of skills and challenges to the class. My son finds my interest in knots cool and is proud of the fact that I'm into something this strange. I'm just glad I stumbled onto it and have had the opportunity to teach it.

I had the pleasure of helping to restore the *May Queen*, one of the oldest commercial vessels still afloat, for a short time while my wife and I lived in Hobart, Tasmania last year. One day one of the painters asked me, "So, Joe, where did you get your rigging experience?" I had to laugh as I told him Indianapolis, the largest landlocked city in the US. ☼

Here I am with one of the students. By the end of the weekend we all have a good backache!



Discovery versus Invention

the third instalment on a philosophy of knots

by 'Knut Canute'

While being interviewed by a local journalist in 2004, I mentioned how new knots emerge now and then. 'Discovered or invented?' she queried. Insightful Guild members sometimes ask that same question. Does it matter? Well, in a developing philosophy of knots, it is an issue to be resolved. As a start, we might agree that knotty data or relationships which already exist (and merely await recognition by a perceptive individual or team) are *discovered*, but a new device or process is *invented*.

Knotting discoveries then include:- 'the Law of the Common Divisor' (by Clifford W. Ashley & George H. Taber sometime in the first half of the 20th century, with a mathematical proof by Georg Schaake & John Turner in 1991); 'the Law of Loop, Hitch & Bight' (Harry Asher, 1986); 'the Law of the Greatest Common Factor' (Jesse Coleman, 1997); and, most recently (reported in KM87, June 2005), the revelation by Selby Anderson that a Carrick bend enlarges in accordance with Golden Mean proportions, resulting in a series of length-to-width ratios close to 1.618 (represented by the Greek symbol Phi) that approach closer and closer to the Fibonacci number sequence.

'Discovery consists of seeing what everybody has seen and thinking what nobody has thought.'

(Albert von Szent-Györgyi, *The Scientist Speculates*, 1962)

Knotting inventions, on the other hand, include:- most knots; plus such innovations as string writing for the blind (David McBeath), the gripspike or gripfid (Stuart Grainger), and the trident splice (John Kemp).

'Necessity may be the mother of invention but her midwives are often Curiosity and Challenge.'

(Geoffrey Budworth, in conversation, 2006)

There can be overlap between **discovery** and **invention**, making it debatable whether an original piece of work is one thing or the other. Both may involve the dedicated and systematic pursuit of an objective, whether vaguely perceived or clearly defined, by means of study and experimentation. Intuition and luck may also play their parts, with fortune favouring the prepared mind. For example, it has been apparent for ages that bends could be related, but the process of mapping their relationships by means of 'trambles' was devised by Desmond Mandeville. ☞

'What one man can invent another can discover.'

(Arthur Conan Doyle, *The Return of Sherlock Holmes*, 1905)

An Overview of Carabiner Hitches for Climbing And Rescue - Part 3

Rob Chisnall

© R. Chisnall, 2006.

The material and illustrations contained herein have been used and will be used in other publications.

Duplication by any means without express permission is forbidden.

Locking Belays and Progress Capture Systems for Hauling

The previous systems create friction and may be suitable for certain belaying, lowering and rappelling applications, but they do not lock up automatically and they always require an attentive belayer. There are a number of carabiner hitches that actually lock up when loaded, but allow slack to be taken in. These are very useful during partner and self-rescue situations when it becomes necessary to improvise a haul system or an ascending system.

The most widely-known technique is probably the Gardaknoten (a.k.a. the Garda knot, the

Blackwall hitch belay, or the Alpine clutch; Prohaska, 1979; Coomer, 2000; literally, 'safety or security knot/hitch'), which is analogous to the Blackwall hitch (Ashley, 1944, knot #1875; used to secure a line to the hook on a snatch block).¹²

Figures 5a and 5b show the set-up. The left-hand side of the line is the load-bearing side, while slack can be pulled in on the right. Most depictions of the Garda show non-locking carabiners and, again, most mountaineers do not carry many locking carabiners (Verdier, 1999 and Coomer, 2000, for example).¹³



5a
Clipping the Garda knot



5b
*The Garda knot (Alpine clutch or Gardaknoten)
The load is on the left-hand side.*

Warning!

Unsafe climbing practices and improper vertical rope techniques can result in injury or death.

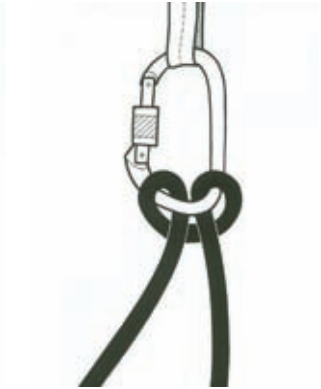
This article is no substitution for proper training, experience and common sense.

It may be necessary to use non-lockers in an emergency. However, locking carabiners are more secure. Experiment with locking carabiners, which have bulky sleeves to ensure that those sleeves do not impair the hitch's feeding action and particularly its locking capabilities.

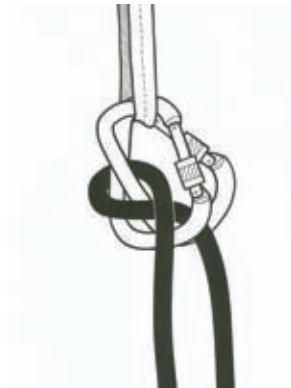
There are several ways in which the Garda can slip and fail, and the key to safe operation is being aware of these dangers. Three modes of failure are depicted, and all depend very much on the shape and size of the carabiners, the rope diameter, and the presence or lack of a Girth Hitch at the top apexes of the carabiners. Prohaska (1979) illustrates how the carabiners can be connected to the anchor point in a very stable fashion using either a girth (Figures 2a and 2b), Prusik or several round turns. Herein, all hitches requiring this feature are shown with a girth hitch. The compression of the girth (or Prusik or wraps) keeps the carabiners properly oriented and stable while allowing them to move - like a hinge point. Without this stabilizing feature, it is possible for one carabiner to pass through the other (Figure 26a) and allow the hitch to become insecure



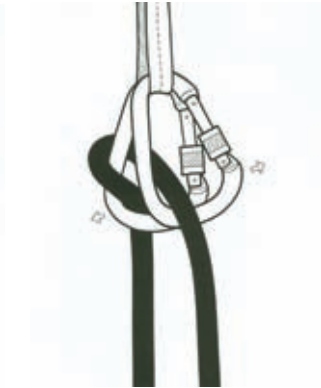
2a
Clipping a girth hitch to a carabiner



2b
*Girth hitch on a carabiner
The right-hand side of the rope bears the load.*



26a
*Garda failure - method 1
The rear carabiner slips through the front carabiner. Note that there is no Girth hitch securing the HMS carabiners.*



26b
*Garda failure - method 1
The rope can slip as the HMS carabiners pivot apart.*

(Figure 26b). Even if the carabiners stay put more or less, if they push apart slightly, or the rope gets disoriented, the hitch can lose its locking ability and simply release the load unexpectedly

(Figure 27). Also, if the bight wrapping the spines slips down and the carabiners pivot out, the rope can slip when loaded (Figures 28a and 28b). Test out the carabiners you carry with the rope



28a
Garda failure - method 3
The bight wrapping the carabiner spines slips down.



28b
Garda failure - method 3
The HMS carabiners pivot apart and the rope slips. Once again, the carabiners are not secured with a girth hitch.

you use to ensure this is unlikely. In particular, large HMS carabiners combined with some of the new lightweight climbing ropes (some of which are around 9 mm.



27
Garda failure - method 2
The rope can slip as the carabiners pivot apart. Note that there is no girth hitch securing the HMS carabiners.

in diameter), and twin or half-ropes (which can be even thinner), increase the likelihood of this kind of failure. Test your gear and use vigilance. (Note that these failure illustrations depict large HMS or pear-shaped carabiners without a stabilizing girth hitch at the upper apexes.)

The Garda can be employed as a progress capture component or clutch in many haul systems, as shown in Figure 6a. As with any rescue system, hauls should be easily reversible



6a
Garda knot with a detachable haul system
The Garda knot can act as a locking belay or progress capture with improvised hauls. In this case, a detachable 3:1 inverted piggyback is depicted with a mechanical ascender and pulleys.

and allow the rescuer to lower the climber at any time. However, The Garda does not lend itself to an easy conversion for lowering. (A possible, albeit somewhat reliable, release method is illustrated in Figure 29 (from Verdier, 1999).) Otherwise, the hitch must be completely unloaded using a detachable haul system before it can be changed to a Münter hitch or something comparable for lowering purposes.

There are several variations of this, which Heinz Prohaska (1979) outlines. The Gleichlaufsperre (Figures 30a and 30b;



29
A Garda knot release technique
A third carabiner with an accessory cord is clipped to the loop wrapping the spine. Pull down on the cord to release the Garda. Caution: the load is hard to control when released.

in German, this literally means 'equal or even running gate or barrier,' or something to that effect¹²). It is very much like the Gardaknoten and Blackwall hitch, but the carabiners face in opposite directions. It is quite smooth to operate, and it can be converted to the Precursor belay (Figures 24 and 31c) and re-locked back into



30a
Setting up the Gleichlaufsperre



30b
The Gleichlaufsperre



24
The Precursor belay

the Gleichlaufsperre - as shown in Figures 31a through 31d. This transition series can facilitate the basic set-up of the Gleichlaufsperre and its conversion to the Precursor floating carabiner belay for lowering (Figure 25a). However, the Gleichlaufsperre can become distorted, forming something similar to the Münter hitch, and thereby slip and fail (Figure 32).

The Gegenlaufsperre (literally, 'return service gate or barrier'¹²; Figure 33), although also little-known and rarely used, is worth mentioning for interest and historical significance, but it is temperamental to operate. It can slip and fail, and the carabiners tend to shift around into awkward and often compromising orientations at times.



31a
The Gelichlaufsperrre
Follow the transition from 31a to 31b to 31c to 31d and back to 31a.



31b
Unclicking the Gelichlaufsperrre
Follow the transition from 31a to 31b to 31c to 31d and back to 31a.



32
Gleichlaufsperrre failure
The hitch can shift into something that resembles the Mnter hitch, and the rope will not lock up.



31c
The Precursor belay
Follow the transition from 31a to 31b to 31c to 31d and back to 31a.



31d
Re-clipping the Gleichlaufsperrre
Follow the transition from 31a to 31b to 31c to 31d and back to 31a.



33
The Gegenlaufsperrre
This hitch offers inconsistent performance and reliability.

Prohaska (1979) Also presents the Schutlerhub-Sperre (literally, 'shoulder-blade stroke/lift'¹² ; Figures 34a and 34b), and I am surprised this technique has not

been adopted for a variety of applications. It is a locking belay hitch in its own right, but it can be employed as an adjustable foot loop for ascending and hauling, among other

applications. There are several linked carabiner variations, one or which is depicted in Figure 35.

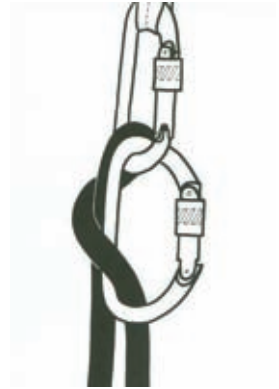
The C & F belay hitch (Figures 36c and 37c) was devised in the 1970's



34a
Setting up the
Schutlerhub-sperre



34b
The Schutlerhub-sperre



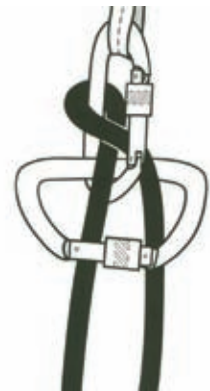
35
A linked carabiner
variation of the
Schutlerhub-sperre
There are a several linked
carabiner variations, some
of which are not reliable.



36a
Setting up the C & F belay
hitch - method 1
Wrap the load side of the
rope behind the upper
carabiner and clip it in.



36b
Setting up the C & F belay
hitch - method 1
Clip the lower carabiner,
as shown



36c
The C & F belay hitch with
the gate opening upward
Note that the load is on
the right-hand side of the
line.

(Chisnall 1981, 1985) to overcome some of the security problems of the Garda and to include a method of conversion for lowering. There are at least two methods of

set-up. The first method is shown in Figures 36a through 36c. Note that the gate of the upper carabiner opens upward and the right-hand side of the line gets loaded.

The second method is shown in Figures 37a through 37c. Again, note that the gate of the upper carabiner opens downward in this case and the left side of the rope



37a
Setting up the C & F belay hitch - method 2
Wrap the slack side around the spine, and under the load side, and clip it in.



37b
Setting up the C & F belay hitch - method 2
Clip the lower carabiner, as shown.

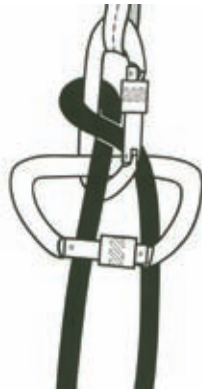


37c
The C & F belay hitch with the gate opening downward
Note that the load is on the left-hand side of the line.

bears the load.

Although it generates more feeding friction than the Garda and the Gleichlaufsperrre, it can be converted into the carabiner wrap belay for lowering (Figures 38a through 38d) by unclipping the load-bearing line and reorienting the lower carabiner so that the rope wraps its spine.

There are several details to note here. First, it is ideal for security purposes to orient all carabiners such that vibration and gravity will cause the sleeve to tighten - in other words, sleeves should tighten downward. (Figure 36c depicts the sleeve up, while 37c shows the sleeve down.)



38a
C & F belay hitch with gate opening upward
With many types of d-shaped carabiners, this is the best configuration for converting to the carabiner wrap belay.



38b
Converted the C & F belay hitch to the carabiner wrap belay
Unclip the load-bearing side of the rope from the upper carabiner, and rotate the lower carabiner so the load-bearing side of the rope wraps the spine and not the gate.



38c
*The carabiner wrap belay
 The left side of the rope
 is the load-bearing side,
 and it is in the non-braking
 mode.*

independently, as shown in Figures 39a and 39b.

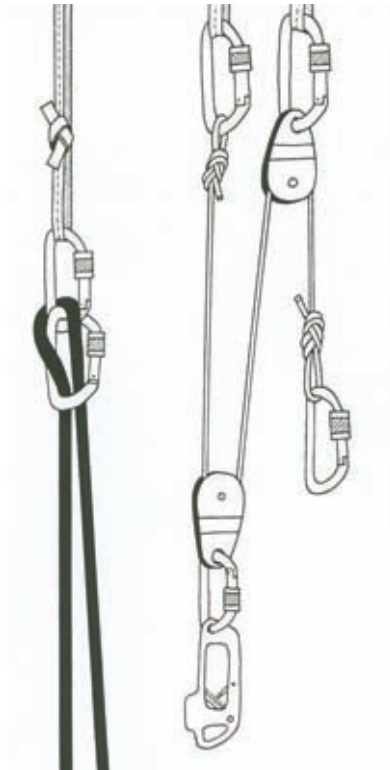
Another detail regarding security of the C & F belay hitch is worth mentioning. The lower carabiner is oriented horizontally to minimize run-through friction, although some carabiners may tend to rock back a forth as the rope feeds through and then locks itself, and the operator must watch to make sure the running lines do not unscrew the sleeve of the lower carabiner.



39a
*Setting up the carabiner
 wrap belay from scratch - step 1
 Wrap a loop through the
 carabiner and around the
 spine.*

However, some carabiners are very narrow, and the conversion to the carabiner wrap belay may be inconvenient or impossible because the gate cannot open to release the load-bearing line. It may be necessary to orient the anchor 'biner so that it opens upward and the sleeve tightens upward. In this instance, conversion is much easier, but gravity and vibration may cause the sleeves to unscrew. Therefore, caution and vigilance are required when the anchor carabiner is oriented upward. (Again, note that Figure 36c depicts the sleeve up, while 37c shows the sleeve down.)

It should be noted that the carabiner wrap belay can be set up



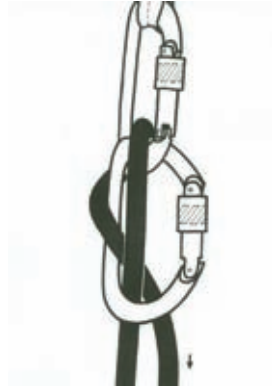
38d
*The carabiner
 wrap belay ready
 for lowering
 The C & F belay
 hitch has been
 converted to a
 carabiner wrap
 belay, and the
 improvised haul
 system (a stream-
 lined 2:1 with
 a mechanical
 ascender and
 pulleys in this
 case) has been
 detached. Note
 that the carabiner
 wrap belay is
 not shown in the
 braking mode. An
 upward brake is
 required maximize
 friction.*



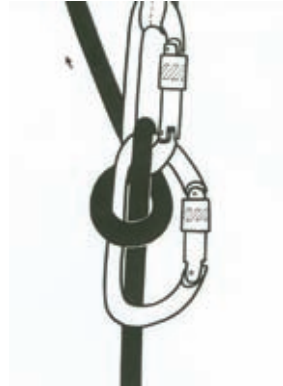
39b
Setting up the carabiner wrap belay from scratch - step 2
Clip the lower carabiner, as shown.

last is incorrect because the slack or braking side of the line will get pinched, thus preventing smooth lowering.

A version of the C & F has been reported by March (1976, 1985) as the Stuffless hitch for crevasse rescue haul



40b
Improper braking method with the carabiner wrap belay
The wrong side of the rope is being used to brake.



40c
Improper braking method with the carabiner wrap belay
The wrong side of the rope is being used to brake.

Figure 40a shows the proper braking orientation. Figures 40b through 40e illustrate improper braking positions. The first three are incorrect because the wrong side of the rope is utilized for braking. The



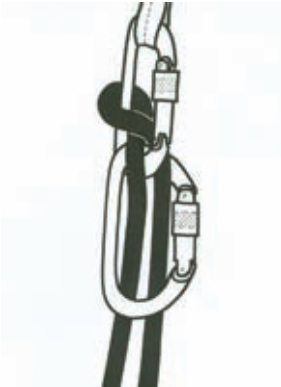
40a
Proper braking method with the carabiner wrap belay



40d
Improper braking method with the carabiner wrap belay
The wrong side of the rope is being used to brake.



40e
Improper braking method with the carabiner wrap belay
The correct side of the rope being used, but it will get pinched by the load-bearing side.



41
*The Stuffless hitch
 The lower carabiner is
 oriented vertically, which
 increases its security as
 well as the friction the
 rope encounters while
 feeding through it.*

systems and as the Noeud Lorenzi (Verdier, 1999), both of which have the lower carabiner oriented vertically (Figure 41), which increases sleeve security while also increasing run-through resistance somewhat. It is likely this hitch was invented concurrently in different areas because it is such an obvious variant of the Garda hitch.

It is interesting to note the repetition and renaming of knots and hitches throughout the literature. The invention and re-invention of techniques and the dissemination of that information along formal and informal channels are dynamic processes

that promote curiosity, creation and discovery, although repetition and the acquisition of pertinent information (historical and current) are constant challenges.

Summary

This terse but hopefully fairly complete overview of carabiner hitches for anchoring, ascending, belaying, rappelling and hauling will offer something new to readers and highlight a number of safety issues. There are several general but key lessons to be derived from this analysis:

1. No system or technique is foolproof. Climbers must be aware of the very real limitations of certain techniques and equipment, and act accordingly. For example, no auto-locking hitch is absolutely bombproof and none can be operated in a hands-free manner with absolute impunity.
2. Some techniques are better than others under certain conditions and for certain applications. Know and understand what will work optimally in any given situation. For example, be careful when using HMS carabiners and thinner

ropes with some auto-locking hitches.

3. Similarly, equipment is not made equal. Different carabiners have different strengths and weaknesses. It is up to you to know these limitations and thereby choose the right 'biner for the job. The simplest example is locking versus non-locking carabiners. Although they are heavier, more expensive, and more time-consuming to use, locking carabiners afford a higher degree of security.

4. Things change, and necessity is the mother of invention. These two truisms are quite apt when it comes to climbing and rescue. Always question the gear and techniques you rely on. Look for ways to improve your systems, but test those modifications in an appropriate manner. Climbers and people who work with rope are inveterate innovators. That is how new techniques get created

Finally, the person most responsible for your safety, ultimately, is the person you look at in the mirror each morning. Make sure that person is constantly aware and properly informed. 🧘

Footnotes

¹² I make reference to a number of articles written in French or German throughout this piece. I do not speak either language, and I have enough trouble with English as it is, so I offer my pre-emptive apologies to the authors of those publications for any omissions, errors or misinterpretations I have made. (Thank goodness for the illustrations in those references. Like they say, a picture is worth a thousand words.)

¹³ Concerning the Gardaknoten:

Eggstein, Page 48:

A version of the Garknoten is depicted in part, with the name Karabinerrücklaufsicherung.

Gutman, 2006, Page 70:

The Garda is depicted with non-locking carabiners on a cordelette without a Girth Hitch.

References

- ACMG. *Technical Handbook for Professional Mountain Guides: Alpine, Rock, and Ski Guiding Techniques*.
- Amenda, Arnold. (1977.) "Carabiner Wrap Rappels" in *Off Belay*, Number 3, June, 1977, p. 12.
- Ashley, Clifford W. (1944). *The Ashley Book of Knots* Garden City, New York: Doubleday & Company, Inc.
- Bechdel, Les, and Slim Ray. (1989). *River Rescue*. Boston: Appalachian Mountain Club Books.
- Budworth, G. (1999). *The Ultimate Encyclopedia of Knots & Ropework*. Great Britain, London: Prospero Books.
- Chisnall, R. (1979.) "In Search of a better Belay" in *Off Belay*, Number 47, October 1979, pp. 15-18.
- Chisnall R. (1981.) "More Notes on Belay Techniques" in, *The Ontario Rock Climbing Association Newsletter* 1981-1, pp. 5-7.
- Chisnall R. (1981.) "Lowering with Haul Systems" in, *The Ontario Rock Climbing Association Newsletter* 1981-5, p. 6.
- Chisnall, R. (1985). *O.R.C.A. Rock Climbing Safety Manual*, 2nd Edition. Ontario Rock Climbing Association, Ontario Ministry of Tourism and Recreation, Canada.
- Coomer, Eric. (2000.) "Life Lines" in, *Rock & Ice*, No. 99, April, 2000, pp. 114-124.
- Eggstein, Otto. (1981.) *Die Seilknoten*, Raeber Verlag Luzern, 60 pp.
- Fasulo, David J. (1996). *Self-Rescue*. Evergreen, Colorado: Chockstone Press.
- Ferber, Peggy, Editor. (1974). *Mountaineering: The Freedom of the Hills*, 3rd Edition. The Mountaineers, Seattle, Washington.
- Filion, Jean-Marc. (1979). *Belaying Theory - An Update*. Chevres de Montagne, North Bay, Ontario.
- Graydon, Don. Ed. (1992). *Mountaineering: The Freedom of the Hills*, 5th Edition, Seattle: The Mountaineers.
- Lipke, Rick. (1997). *Technical Rescue Riggers Guide*, Revised Edition. Bellingham, Washington: Conterra Technical Systems Inc.
- Long, John, and Bob Gaines. (1996). *More Climbing Anchors*. Evergreen, Colorado: Chockstone Press.
- Luebben, Craig, and Illustrations by Steven Dieckhoff. (1993). *Knots for Climbers*. Evergreen, Colorado: Chockstone Press.
- March, Bill. (1976). *Modern Rope Techniques in Mountaineering*, 2nd Edition. Cicerone Press, Manchester, England.
- Martin, Tom. (1987). *Rappelling*, Edition II. SEARCH, Mt. Sterling, Kentucky.

- Raleigh, Duane, and Illustrated by Mike Clelland. (1998). *Knots & Ropes for Climbers*. Mechanicsburg, Pennsylvania: Stackpole Books.
- Robbins, Royal. (1971). *Basic Rockcraft*. La Siesta Press, Glendale, California.
- Gutman, Martin. (2006.) "Tech Tip, Alpine: Light-and-fast hauling ratchet" in, *Climbing*, No. 245, January 2006, p. 70.
- Hansen, Douglas S. (1981.) "Improvisation-The Key to Survival" in *Summit*, Volume 27, No. 3, May-June, 1981, pp. 20-21.
- March, Bill. (1985.) "Crevasse Rescue" in, *Summit*, Volume 31, No. 4, July-August 1985, pp. 8-13.
- March, Bill. (1976.) *Modern Rope Techniques in Mountaineering*. Manchester, England: Cicerone Press, 127 pp.
- Mariner, Wastl. (1963.) *Mountain Rescue Techniques*. Oesterreichischen Alpenverein, Innsbruck. 200 pp.
- Mariner, Wastl. (1977.) *neuzzeitliche bergrettungstechnik [sic]*. Herausgegeben vom sterreichischen Alpenverein, 192 pp.
- Prohaska, Heinz. (2001.) "Knotentests - Das Verhalten von Seilknoten" in, *Erweiterung zum Kongressband Psyche und Berg* 1991.
- Bachmann, Garda, Prohaska, Clove, Münter, Monster Münter, insecurities Prohaska, Heinz. (1979.) "Neues über Flaschen-züge" October, 1979, pp. 18-20.
- Martin. Tom. (1987.) *Rappelling*. Mt. Sterling, Kentucky: SEARCH.
- Smith, Bruce & Padgett, Allen. (1996). *On Rope*. Huntsville, Alabama: Vertical Section, National Speleological Society.
- Smith, Lonnie. (1979.) "The Double Carabiner Brake" in, *Off Belay*, Number 43, February, 1979, p. 15.
- Smutek, Ray. (1979.) "Brake Bar Rappels" in, *Mountain Topics 1: On Climbing Equipment & Technique* (Off belay Reprint Series), pp. 13-16.
- Sproull, Chuck. (1979.) "Some Additional Comments" in, *Mountain Topics 1: On Climbing Equipment & Technique* (Off belay Reprint Series), pp. 13-16.
- Thrun, Robert. (1973.) *Prusiking*. Austin, Texas: The Speleo Press, 75 pp.
- Verdier, Jean Pierre. (1999.) *Escalade - S'initier et progresser*, editions Amorpha, janvier 1999. ISBN: 2-85180- 519-3
- Wheelock, Walt. (1967.) *Ropes, Knots & Slings for Climbers*, Revised Edition. Glendale, California: La Siesta Press, 36 pp.



Rope Ends

Each job must be done a certain way. Ask the rigger why, and he'll probably say, "B'guy, I dunno. I allus done it thataway n I don't know a better way. But lemme tell you one thing, no job amine ever let go!" What he means, although he doesn't know it, is that his method was acquired through tradition, and its superiority was proven by experience."

The Marlinspike Sailor by Hervey Garrett Smith

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.

Middleman's Myth

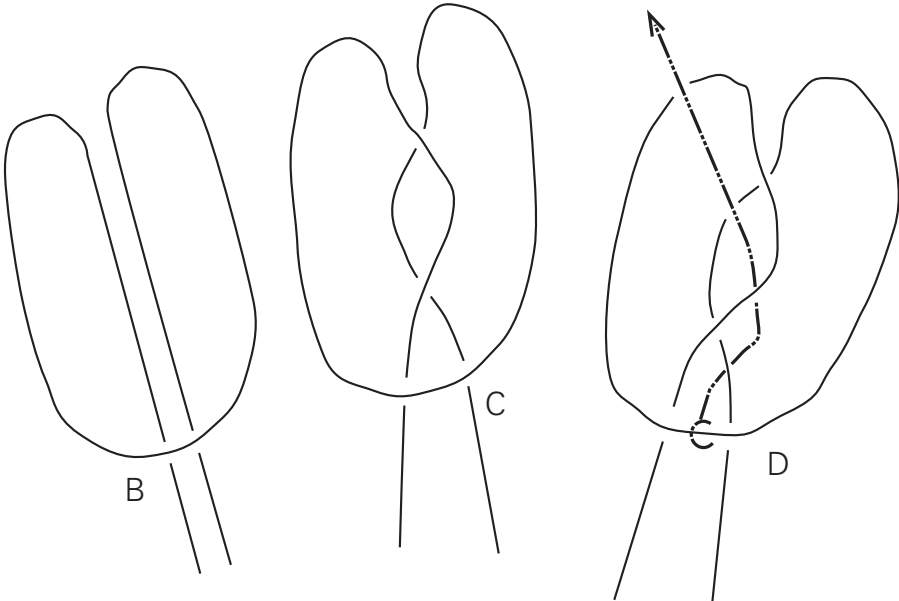
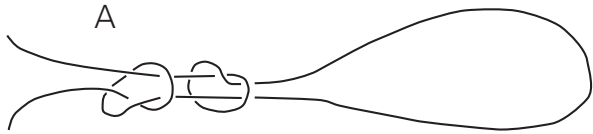
The Scout Movement is 100 years old this year. In 1907 Robert Baden-Powell held an experimental camp with 24 boys on Brownsea Island, in Poole Harbour. I was not there, quite, but one of the boys was named Blandford. I became a Wolf Cub (Cub Scout today) at the age

of eight in 1920 and have never left the Movement. Work it out. I am getting a little ancient.

B.P. wrote the book *Scouting for Boys*, published in fortnightly parts. The knots we use for the knot challenge over the years at many exhibitions come from this book, but there was one more originally.

This was soon dropped, because of a snag. This was the middleman's knot. Maybe B.P. thought the ingenious way of tying it would appeal to boys, but it was unsatisfactory in what it was supposed to do.

It was claimed to be a mountaineer's way of putting a loop in a rope without using the



ends. It will, but if you experiment with a piece of rope, you can see the snag.

In effect, the middleman's knot is a fisherman's knot with a loop (A). Throw back a loop of the size you want over the two standing parts (B). Cross the standing parts within the loop (C). Put your hand down through the crossing and grasp the loop. Hold the two standing parts with your other hand and pull the loop back through the crossing (D). There is the knot completely formed, but

Hold one standing part and pull the loop. It will stay firm. Hold the other standing part and pull the loop. The overhand knots will slide apart and the loop will get smaller. The climber would get a course of slimming around the waist he was not expecting.

Forming the knot can be treated almost as a conjuring trick. The only use of the middleman's knot I have found is when I am demonstrating knotting and I want to show how clever I am. Try it. They will all want to know how to do it.

*Percy W Blandford
Stratford-upon-Avon,
Warwickshire, UK*

More on Pawitrak Rings

Here are two photographs of a silver Pawitrak ring. The underside of the ring shows how the two ends of the left side string and the two ends of the right side string are fused together under a flower design.

*Satish Patki
Sahakarnagar Pune, India*



Name Changes

I am going to suggest that the names of a few knots, which I have tied a lot of times, should be changed. My point is not to be critical but to bring about some improvements.

I will start with the three-strand wall knot and move on from there. One time around is a wall knot, a second time around is a double wall knot, and a third time around and we have a Matthew Walker knot,

shown in Ashley's book p118 #680. In a full Matthew Walker, each strand comes up through itself forming an overhand knot. The result is a nice compact knot. The ends of a Matthew Walker knot can be passed around again to form and advanced Matthew Walker knot.

The Matthew Walker knot can be tied directly on the back of the hand as in the third drawing of #678 (p118). The two-strand Matthew Walker knot is a neat little knot with each strand containing an overhand knot. The crown of this little two-strand knot is started by placing the right hand strand on the bottom. To qualify as a Matthew Walker knot each strand must contain an overhand knot.

Now for the diamond knot. Somewhere back in history, the diamond knot was misnamed. It was called the footrope knot, which is a mediocre word. Ashley mentions the footrope knot #696 (p122). He says that if this knot is turned over with the crown on top it has a much neater appearance. The knot shown to the left of #696 is the footrope knot. The knot shown to the right of #696 is the pretty diamond knot, tied with a crown on top.

This three-strand knot can be tied with the crown on the bottom but that's when it loses its neater appearance. When referring to the diamond knot, pay attention to the drawing to the right of #696, as regards the diamond knot. The word footrope could be discontinued.

The two-strand diamond knot contains an overhand knot in each strand. The crown of this little knot is started by placing the right hand strand on top. I believe this knot could be used for tying two ends together. After a hard pull it's easily untied.

Next are the Turk's heads. I can do a little with them, but really not very much. I hope to do more. Turk's heads are referred to as knots. I don't think they should be. Turk's heads are not knots; they are braids. They are round or cylindrical braids and are usually tied with only one strand. There are many different kinds and all of them are fascinating.

Working with ropes and strands is a rewarding and pleasing experience. Comparatively though, only a few people realise this. Boys and girls everywhere between the ages of eight and fifteen should be given a chance

to learn something about this interesting subject. A number of them may want to go on from there. It's an excellent way of exercising the mind and the hands.

My wish is that a lot of schools would take my suggestions seriously and start having classes for knot tying and braiding every two weeks or a month.

Gene Ulrich
Faith, South Dakota, USA

Marlinspike Seamanship - the definition

Something I have been curious about for a long time.

"Marlinspike Seamanship" represents a form of knot-tying that has been practiced for hundreds of years, the marlinespike, as a tool, is used on wire rigging - wire rigging didn't come into common use until late in the 1800s with the fast clippers, before that rope was splice with a wooden fid.

Terry Ridings
Salt Spring Island, BC,
Canada

Hardy's Pick

Twenty years ago I acquired an old tool at Portland Naval Base in England. It is called: "Hardy's Wire Rope Cutter".

The riggers told me that all of the main naval bases in England were once furnished with the same tool.



Rope Ends

Definition

[from the *Sailor's Word Book - A Dictionary of Nautical Terms*, by Admiral W.H. Smyth, first published in 1867]

Fimble hemp: *female hemp*, is that which is chiefly used for domestic purposes, and therefore falls to the care of the women, as *carl* or *male hemp*, which produces the flower, does to the maker of cordage.

"Wife, pluck fro thy seed hemp, the *fimble hemp* clean,

This looketh more yellow, the other more green;

Use this one for thy spinning, leave Michael the t'other,

For shoe-thread and halter, for rope and such other." - *Tusser*.



I would like to find out when wire rope cutters like this were used in England's riggers lofts or elsewhere. My guess is by around 1900.

Maybe Guild Members have a more exact answer.

Karl Bareuther
Glucksburg, Germany



Knotting Diary

GUILD MEETINGS

Half-Yearly Meeting

13th-14th October 2007
Quarry Bank Mill, Styal, Cheshire
Contact: Dave Walker
Tel: (0044) 01244 682117
Email: dwfenders@yahoo.co.uk

AGM & Meeting 2008

10th - 11th May 2008
Weald & Downland Museum
Singleton, Sussex
Contact: Charlie Tyrrell
Tel: (0044) 01798 344258

BRANCH MEETINGS

Alaskan

Every Wednesday evening 6.30-8.00
Anchorage Senior Center
1300 East 19th Avenue, Anchorage
Contact: Mike Livingstone
Tel: (001) 907 929 7888

East Anglian Branch

15th September 2007
Museum of East Anglian Life,
Stowmarket, Suffolk
Contact: John Halifax
Tel: (0044) 01502 519123
Email:
john@endeavour-knots.freemove.co.uk

Midlands Branch

8th October 2007
The Old Swan (Ma Pardoe's),
Halesowen Road, Netherton
Contact: Bruce Turley
Tel: (0044) 0121 453 4124
Email: bruce.turley@blueyonder.co.uk

Netherlands

Last Saturday of each month
De Hoop, Nr Rotterdam Maritime
Museum, Rotterdam
Contact: Jan Hoefnagel
Tel: (0031) 078 614 6002

Pacific Americas

2nd Tuesday of each month
Los Angeles Maritime Museum,
San Pedro, California
Contact: Jimmy R Williams
Tel: (001) (310) 679 6864
Email: igktpab@yahoo.com

Solent Branch

9th October 2007
Travellers Rest Inn, Newtown,
Nr Wickham, Hants
Contact: Gordon Perry
Tel: (0044) 0239 2592808
Email: GORDON5463@aol.com

Sussex Branch

3rd September 2007
Sussex Yacht Club
Contact: Charlie Tyrrell
Tel: (0044) 01798 344258

EVENTS

Yorkshire

Selby Canal Festival
15th - 16th September 2007
Selby Boat Centre, Selby, Yorkshire
Contact: Ken Nelson
Tel: (0044) 07836 722198
Email: knotnut1@yahoo.co.uk

To place your Branch Meeting or Knotting Event in KM, please send to the editor by post or email. Ensure you allow sufficient time for inclusion.

