

Knot



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Notes on Nested Grids (3) Components at Work

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Prologue

In our second *Notes on Nested Grids* we discussed the types of components, which can be found in an arbitrary Nested Knot. Here we look at how components interact in a real-life sample of which "Lilpep" placed an image on the internet.



Regular Grid Components

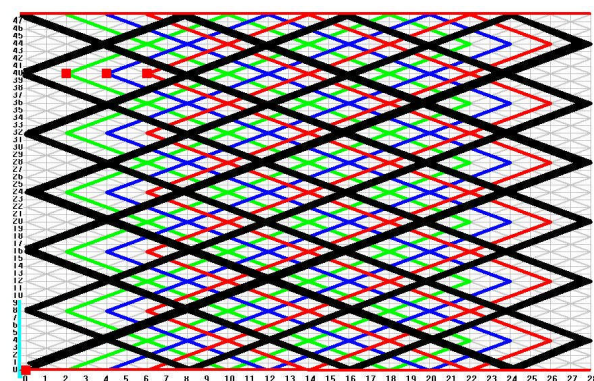
Clearly we hold a 4-pass row-coded structure, consisting of 4 Regular Grid components, which are colored: White, Green, Dark Brown and Light Brown. The White component has 7 parts, i.e. $p=7$. It is safe to assume that this will be a single stranded Regular Grid. It is not evident how many outer bights are involved, but it will probably range over 4, 5, 6, 8 or 9 bights. For the time being, let us say that there are 6 bights, i.e. $b=6$. Later we shall show that this assumption has little influence.

Identical analysis shows that the other Regular Grid components have dimensions $p/b=5/6$.

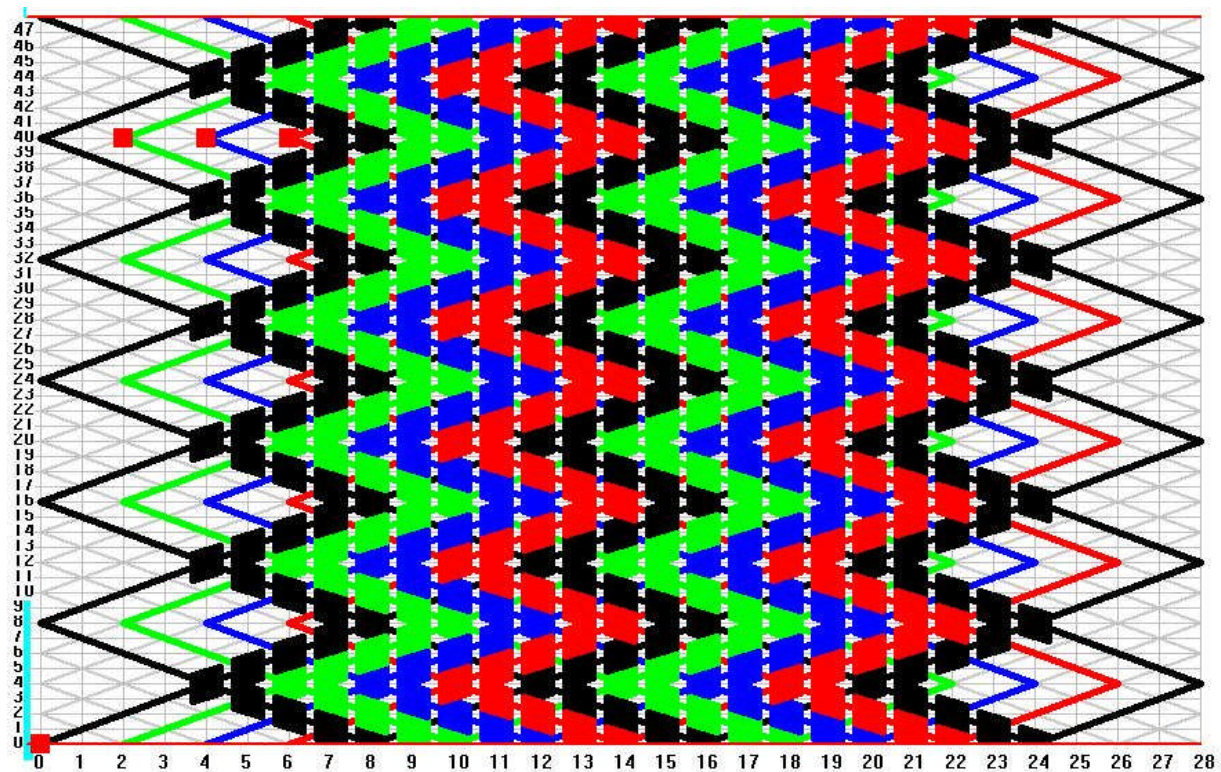
The Underlying Nested Grid

In our paper on Grant's Perfect Pineapple Quest we saw that $A=y$ offers Nested Grids which accommodate the A-pass coding best [2]. As we have a 4-pass coding here we thus know that $A=4=y$. We have assumed that the White component is regular and that it has $b=6$, this yields $B=6$. We now merely seek the x -value. As y is an even number, it follows that x must also be an even number and will be in the vicinity of 20. Analyzing the color sequences (WGDWGDW) it becomes clear that $x=16$. We thus hold a Nested Grid (6,4,16,4). It is shown below with the color mapping.

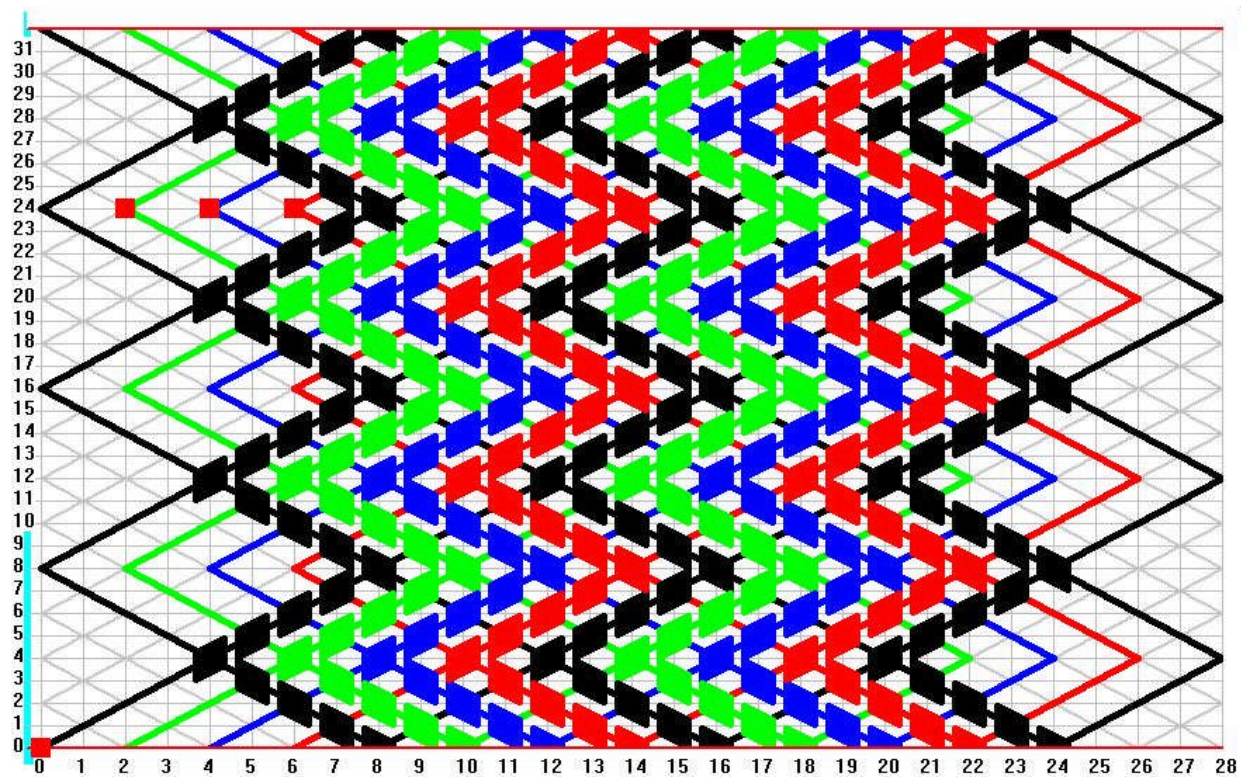
Lilpep's Knot	Grid
WHITE	BLACK
GREEN	GREEN
DARK BROWN	BLUE
LIGHT BROWN	RED



Note the $p/b=7/6$ (black component) and the skew-placement of the three remaining $p/b=5/6$ components.



Lilpep's Knot as 4-pass row-coded Nested Grid (6,4,16,4)



Lilpep's Knot as 4-pass row-coded Nested Grid (4,4,16,4)

Applying the Coding

The 4-pass row-coding can be applied in a number of ways [2]. In the images on the previous page it has been done in accordance with Lilpep's photograph.

Variations to the Theme

We said that our choice of $b=6$ had little influence. This can be seen from the Nested Grids (4,4,16,4) and (8,4,16,4). For $B=5$ the design will fail to yield the result we seek (just try ☺). A 5-pass row-coding, however, can be applied to the Nested Grid (6,5,19,5) which is given below. It results from interweaving four species of a $p/b=5/6$ onto a $p/b=7/6$ Regularly Gridded Base Knot. I will leave it as an exercise to the reader to apply the 5-pass row-coding.

Epilogue

Theory can be dry as dust, but I hope that this little article shows how it can aid you in reconstructing the actual knots from mere images.

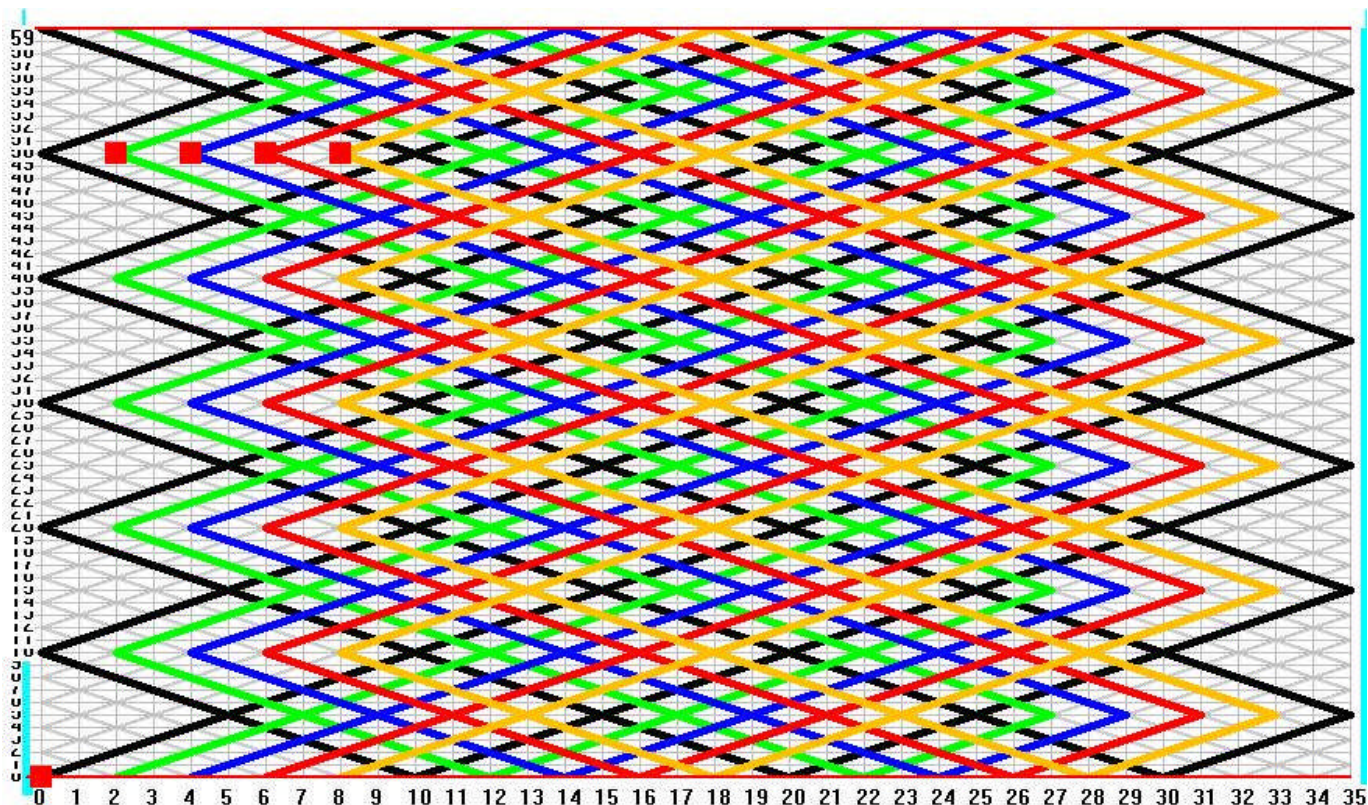
Acknowledgements

Thanks to Jorge "Lilpep" Rodriguez for permission to reproduce his knot photograph in this article.

References

1. P.v.d. **Griend**, "Aspects of Sphere Covering Knots", *Knot News*, issn 1554-1843, no.57, pp1-6, September 2006.
2. P.v.d. **Griend**, "On Gridtype and Coningform Interplay", *Knot News*, issn 1554-1843, no.66, pp1-8, March 2008.

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Stiphout, November 2009



Apply your own 5-pass Row-coding to the Nested Grid (6,5,19,5)

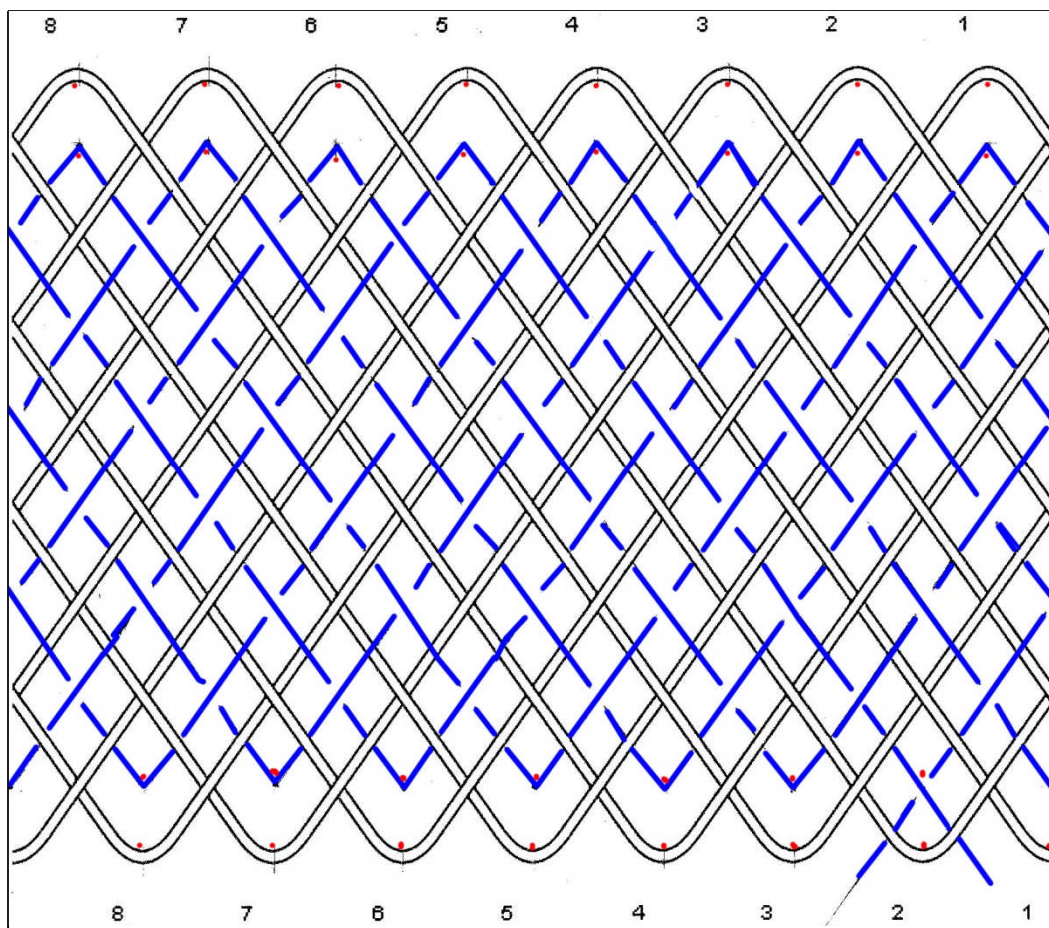


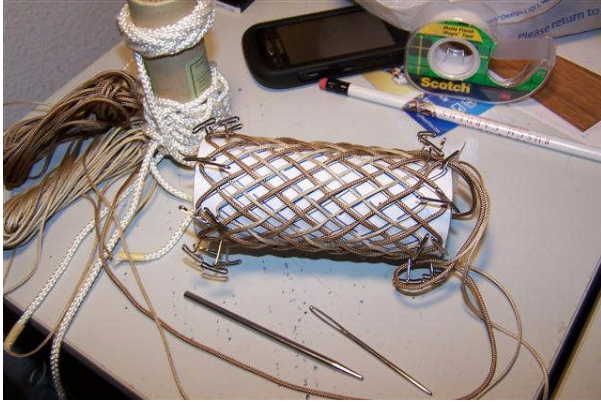
16 Part x 16 Bight 2-Pass Type 1 Pineapple Knot Rick "Skyout"

This is a grid that will fit on a toilet paper tube similar to many of the fine grids that Pat Ducey made for us. This one is from a Base 9 part x 8 bight Turk's Head with a 7 part x 8 bight Interweave, which gives 3 zigzags in the finished knot. I don't believe there is a tutorial for this one yet.

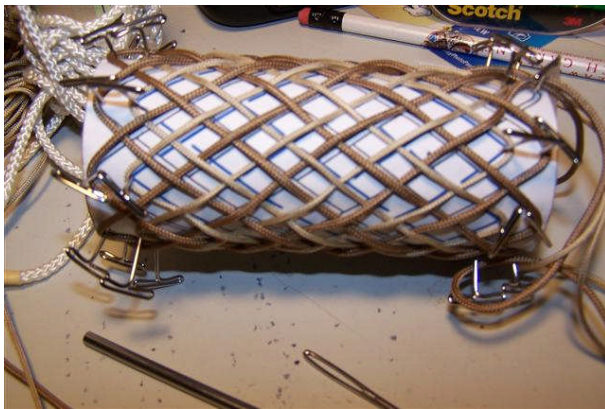
Print out the grid, cut it out close (this one just barely fits the TP tube from top to bottom), tape it to the TP tube. Fill the tube with newspaper then use either finishing nails or T-pins at the top and bottom bights (the red dots). Start the first (white) line anywhere you like – I like starting at #4 going up and left to #8. I start the second (blue) line at #2 going up and left to #5. Solid lines go over and broken lines go under.

Thanks to Tim and John Allwine for the Gridmaker, this is such a cool tool.





Tied on the TP tube with Grid.

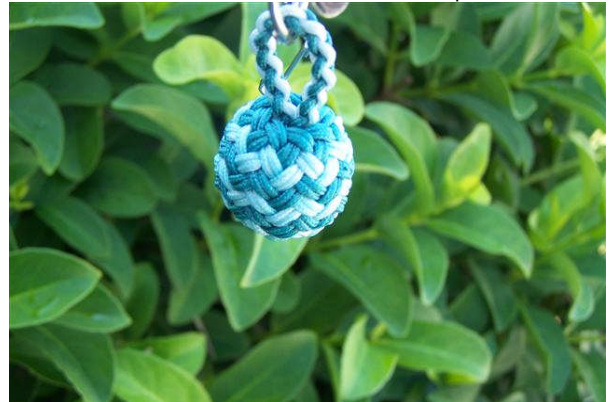


The Pineapple Knot moved from the TP tube (with the first line doubled) to a $\frac{3}{4}$ " dowel.



Both lines doubled and moved to a $\frac{7}{8}$ " dowel.
(Picture of an earlier Pineapple Knot)

16 Part x 16 Bightt, 2 pass Type 1 with a $\frac{3}{4}$ " wooden core.
The handle is a double colored 4-strand square braid.



Sorry, I don't know the cord size as Don B gave it to me.
Is it that 1.4 mm venetian blind cord?



Resize the grid to the size of your finished product and make your own custom tube to cut down on tightening.

From the Mail Bag

In the last issue of Knot News, we had the introduction of and discussion about our "Knots 101" knot training scheme. We have had a number of responses from our readers and I would like to share them with you. This may get other members talking as well and that would be a good thing. More comments are always welcome...

JIM "JIMBO" LONG OF , SOUTH CAROLINA
SENT IN THIS: "I was happy find to the 'Knots 101 Part 1 of a Series about Teaching Knotting' section! In isolation, I happen to have a little experience at that.

All my life, people kept calling me "the knot guy" or "knot nut". A Knot Savant, knots "just come out of my hands" when needed, untie with a minimum of fuss (or jam permanently if that's what I want), and don't eat much rope. I hardly ever knew what they were called, just 'this' holds 'this way' and 'that' slips when you pull it 'that way', etc. Always, all ways, always there have been interested, curious onlookers who'd stick by me and ask questions... Usually, I'd encounter a situation that required a knot, would come up with an appropriate collection of kinks and curves, and then teach it directly to the person who needed it. Task-based training is only good for a production environment with disinterested workers (or disinterested teachers, when the fish are biting). Knot Knuttery (i.e. Nuttury with Nottery) requires a deeper, conceptual understanding to allow the burgeoning kinker of cordage the opportunity to grow into their new Craft. Likewise all my life, I have realized a strong "desire" ("passion", "obsession", whatever) to increase the general knowledge level of those I find around me. That means teaching skills (pun intended), because merely "holding forth" merely pisses people off.

The more I study knot tying, the more I realize whoever wrote your article (no name on the banner...) just adroitly danced around knottery's "400# gorilla in the room" in the example paragraphs.

One of the most important "teaching skills", after direct Subject Matter expertise, is the ability to communicate ideas effectively, from the most atomic, fundamental concepts to convoluted, esoteric processes. That requires a structured language, common to both parties. Not "this language" or "that language" necessarily, not even a complete language, just a common one, with sufficient scope to include all relevant possibilities pertinent to the topic at hand. In Data Communications (an engineering discipline) we learn that Communications requires a Sender, a

Receiver, and a Protocol defining the symbols ("words", "tokens", "messages", etc.) to be used to represent meaning, and the pathways ("channels", "circuits", etc.) through which the "words" are conveyed.

In my case, I only "found" the rec.crafts.knots newsgroup, the IGKT, the ABOK etc., while trying to find the name of the "Single Bottle Knot". I had used it for a good while to hang bottles, jugs and jars. And when I taught it to my nieces, they insisted on calling it "Uncle Jimbo's Jug Sling", which I could not countenance. The books, the Guild, the newsgroups and other online resources, as well as the many individuals therein represented, all constitute the "channel" through which knotting information already flows quite freely. Even *Knot News*, though somewhat limited in scope, also counts, demonstrably, as an "Information Superhighway" through which High Quality Knowledge can be transferred. The most amazing part of that journey was the discovery that, if one wants to learn and is willing to go asking, there are a lot of different "channels", and more seem to pop up daily.

And as my other silly anecdotes should illustrate, Senders and Receivers are vastly plentiful everywhere.

Knot tyers need a lexicon. We need words. Definitions we have (e.g. *"the rabbit goes around the hole"* – *abhorrent, I know, but the almost obligatory use of metaphor screams my point for me*), but there are too many crossover points at which confusion can erupt (*don't put in Two Half Hitches that way! put in Two Half Hitches this other way, or I'll insult you!*), with concomitant losses of quality and trust, where the same word means too many different things, or there aren't words sufficient to describe a fundamental concept.

Someone, perhaps an authoritative "Guild", is needed to weed out the extraneous meanings for existing words and assign words to the orphaned meaningful concepts and components. The odd pronunciation quirks (cf: "tackle" and "shackle") could be better appreciated if the suspicion of subterfuge could be eliminated. "Suspicion??" The potential students I meet often express doubt as to the efficacy of this or that kink in a cord, until they're shown. That need for experiential confirmation demonstrates a lack of trust in the "formula". (*Gratuitous example: even members of the IGKT expressed doubt when I explained how I'd secured my boat to a tree through a storm by making the bow painter fast to a tree with a Clove Hitch. I configured it as a Single Hitch which held the strain I needed it to, backed up by another Single Hitch, which locked the first one down – and tried to*

explain it thus, but the fact that I was relating a real-life event (experiential knowledge) did not deter some members from feeling somewhat skeptical.)

I have expressed some dismay at the use of jargon by some knot tyers, and this is an attempt to ameliorate that error. In the interest of speedy exchange of information among cognoscenti, jargon is a useful tool, but we all have to be very, very careful to keep it “amongst ourselves”. As Col. Cooper says, it’s great fun but it scares the horses. However, on third thought, maybe there’s some Hope to be found there... Acronyms (“SKLK” instead of “Sailor’s Knife Lanyard Knot”, eg.) and made-up words like “SPart” and “WEnd” are easier to type and vocalize; but normally act to retard the uptake by newbies (look at computer jargon for example) of new data. Since knot tyers are burdened already with a somewhat blurry lexicon, perhaps it would be possible to incorporate some or all of the current vernacular and jargon into a “complete” Dictionary of Knotting Terms... If you tell someone to turn ‘round in their turn and put a round turn on the Round Tern, you have spoken clearly and precisely, yet only an ever-diminishing few will understand what you meant.

On the other hand, if words like “SPart” (*which still makes me want to check my shorts*) could be “ordained”, their usage would quickly disperse through that “channel” of knot tyers, the Internet, and publications galore. Then, establishing the precise (generally accepted) definition of overused words completes the picture!

Or we could just keep passing along our knowledge “hand to mouth”, one on one, as hoc, catch-as-catch-can, whatever... It’s working now, but seems horribly inefficient.

With apologies to the Brothers Gibb, “It’s only words, but words are all I have, to take your heart away...” That’s what I think anyway. Thanks for following along!

MIKE STORCH OF _____, IDAHO HAD THIS TO SAY: “I’d like to offer some feedback on “Knots 101” in issue 77 of the newsletter.

I sometimes give braiding lessons though not to groups – I prefer one on one, and I keep it informal – and I work exclusively in leather, which alters my approach.

I agree that terminology is very important, but my way is to introduce new terms as the need arises, rather than all at once – I believe to introduce all the terminology at the beginning will tend to confuse a new student, and some of it will be forgotten.

As for the reasons I teach one to one rather than a group, well... there are not many people that live in the places I choose to live in – to find just one with serious interest in braiding is an event. But the more important reason is “quality vs. quantity” – I find it more exhausting, and at the same time less productive, to work with a group. The time and effort it takes to work with a group, and make sure each person is catching on, splits my attention and blurs my focus – the entire group gets held back to the pace of the slower students – or the slower students fall further behind in an effort to cater to the quick ones – either way, some of the group is compromised – one on one I can watch the progress, read the abilities, and apply quality time when and where it is needed – groups work well enough at the introductory level – the more serious and capable student should then be individually “tutored”.

On a deeper level, and more to the point, I do not teach a student how to braid so much as I help a student learn how to braid.

I braid leather – kangaroo leather – where I seem to excel is in the preparation of my leather before the braiding begins – I believe you can be a good braider, but if your leather is not prepared properly you cannot reach your full potential – improperly prepared lace, or worse yet, lace off the spool from a factory, will leave you at the hobby level – leather preparation opens the way to turn your hobby into a craft – this is where I prefer to begin tutoring a more capable and serious student – the rest will follow.

PAB Myerchin Knife Auction

The results of the Knife Auction are in:

#1 Offshore Crew	\$ 60.00
Charles Hamel	
#2 Offshore Folder	\$ 50.00
Charles Hamel	
#3 Offshore Safety	\$ 25.00
Charles Hamel	
#4 Offshore System (brown)	\$ 50.00
Brian Kidd	
#5 Offshore System (white)	\$150.00
Lindsey Philpott	
#6 Offshore System (black)	\$ 50.00
Bob & Sue Bosch	
Total Earnings	\$385.



This is the "Blue Whale" Pineapple Knot by Donald Wright – the "Mammoth" Knot (right) for comparison.

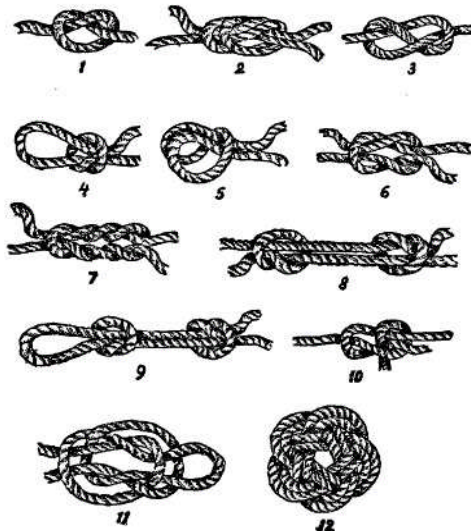


The Blue whale is an 800 Lead by 8 Bight Pineapple Knot and is begun with a 401 Lead by 4 Bight Base Knot

dylikt huvud, men med nedböjda, öronen omslutande horn. K. är i vissa egyptiska myter demiurgen, som på sin drejskiva — han är nämligen den förste krukmakaren — skapar världsägget, hvarur allting framgått. Han är därjämte icke blott en solgud, utan antager ganska tidigt egenskapen af "vattnets förlänare" och "öfversvämningens herre", m. a. o. han blir tillika ett slags Nilgud. I sistnämnda roll dyrkades han företrädesvis vid första katarakten och då jämte sina båda kvinnliga följeslagare, Anukis och Satis.

K. P. (N. Sbg.)

Knut. Knutar användas till att fästa eller förena tåg, rep, snören, trådar, band o. s. v. med hvarandra eller med andra föremål, äfvensom till prydnad. På sjön kallar man dem *knopar* och *stek* (se dessa ord). De i land mest använda torde vara följande: halfknut l. fingerknut (på sjön öfverhandsknop; fig. 1), som tjänar till att



fästa en tråd (t. ex. i tyget, när man syr), ett snöre o. s. v., men äfven till att förena två trådar med hvarandra, då den kallas vattenknut (fig. 2), och för att göra en ögla, som icke glider, ögla med vattenknut. En åtta l. flandrisk knut (fig. 3) användes på samma sätt. Ränknut l. grimskafteknut (fig. 4) användes allmänt, t. ex. när man binder en häst, men är ofta svår att taga upp igen. Bättre för detta syfte är två halflag om egen part (se Knop), som äfven användes mycket i land, eller pålstäk (se Stäk). Mest använd af alla knutar torde vara den i fig. 6 afbildade; den kallas på sjön råbandsknop och har i land en mängd namn: hårdknut, brakknut, blåknut, vräxelknut, vrängselknut, tvärknut, stenknot, smällknut m. m. Rätt gjord, är den symmetrisk till skillnad från den odugliga s. k. karingknuten (se Knop). Den förekommer äfven i somliga nät (ryssjeknut). Den göres ofta liksom många andra knutar med öglor, för att lätt kunna lossas, och användes sålunda t. ex. som halsduksrosett. Den var känd och värderad redan

i forntiden; den förekommer på vestalernas i senare tid upprädda statyer i Rom, nämligen på den gördel, som sammanhåller manteln, och är därför utan tvifvel identisk med de gamles herculesknut, som ansågs ega öfvernaturliga egenskaper. Ännu bättre, när det gäller att förena två ändar, är väfknuten (fig. 10), äfven kallad varpknut, tumknut (på sjön skotstek). Detta är äfven den vanliga knuten i nät, använd snart sagdt öfver hela jorden. Fig. 7 är en kirurgisk knut l. tvinnknut, fig. 8 en fiskarknut, fig. 9 en kärleksknut, fig. 11 en säckknut. Valknutar bestå af en ringformig fläta och användas mest till prydnad. Det ges 3-flätade (fig. 12), men äfven 4-, 5-, 6-flätade o. s. v. Se Hj. Öhrvall, "Om knutar" (1908).

Hj. Ö.

Knut, liggande timmerstockars hopfogning i hörnen af ett hus. Knuten kan utföras på olika sätt. Vanligast äro korsknut, där timmerändarna ut-

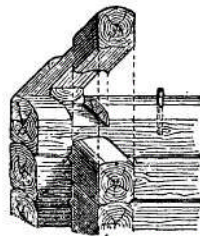


Fig. 1. Korsknut.

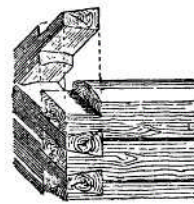


Fig. 2. Laxknut.

skjuta utanför hophuggningen, och laxknut, i hvilken stockarna hopfogats med i själfva ändarna snedt huggen lax, hvarigenom knutens yttersidor ej utskjuta utanför väggen. Knuten skyddas vanligen genom påspikade bräder. Jfr Knutning.

H. J. Dft.

Knut, ry., piska af flera hopflätade oxsenor eller ogarfvade remmar, hvilka i ändarna skilja sig; slag, utdelade med en sådan piska. — Som straffredskap förekom knutpiskan i Ryssland först under den tatariska perioden; den nyttjades ända in i midten af 1700-talet för afstraffning af alla slags förbrytare i synnerhet politiska. Från Katarina II:s tid inskränktes dess användning till simpla förbrytares (mördares, kyrkoröfvares och mordbrännares) afstraffning. Under Nikolaus I afskaffades knutpiskan och ersattes af den tresnärtiga pletj, som i sin ordning afskaffades af Alexander II. Den till knut dömda förbrytaren bands stående vid ett par pålar, och slagen föllo på hans blottade rygg; stundom dogo de piskade under exekutionen. I politiskt agitationsspråk har ordet "knut" ofta användts som symbol för själfhärskardömet inre styrelse.

Knut, svenska konungar:

1. K. Eriksson, son till konung Erik den helige, sökte till en början göra Karl Sverkersson tronen stridig, sedan denne blifvit erkänd som konung äfven öfver svearna. Han måste dock fly till Norge, men återkom 1167 samt öfverföll och dödade sin motståndare på Visingsö. Därefter hade han en tid att utkämpa strider med ättlingar (Kol och Burislev) af den sverkerska ätten, som synas ha fått understöd från Danmark. Han besegrade dem omsider och var därefter under tjugutre år obestridd herre öfver

Ord, som saknas under K, torde sökas under C.

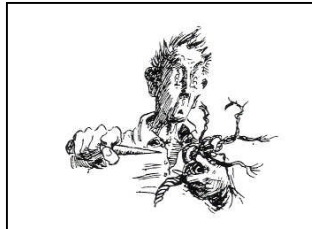
Short article "Knut" [Knots] in the 1911 Swedish encyclopedia *Nordisk Familjebok* by Hjalmar Öhrvall (author of the seminal knot classic *Om Knutar* "On Knots").



A knotted playground in France – photos provided by Charles Hamel



How many strands are in the serving?



When you enter Disneyland in Southern California one of the first things you notice is this colorful knot. It sure caught my eye anyway!

HOW TO TIE THE CORK ON A CHAMPAGNE BOTTLE USING THE OLD FASHIONED WAY

Charles Hamel

Before the wire cage they used an oiled hemp twine.
If you are interested in a full story just go to: <http://tinyurl.com/neorsr>

