Long Buckby Machine Knitters

Special edition Newsletter

During the shutdown caused by the coronavirus pandemic, Long Buckby Machine Knitters will issue special editions of our newsletter. This can be found on the website and will be issued on a monthly basis.

may 2020

The Editor

I hope you are all well and able to pass the time with knitting!

This edition is all about yarn, something which machine knitters all love!

While most of us use mainly coned yarn, there is a great deal to be said for experimenting with hand knitting yarns, too, and probably a lot more variety.

I have tried to give an overview of factors to consider when choosing yarns. Starting with fibre content, going on to consider measurements [length, weight, thickness], and, finally, to consider machine knitting techniques which might enhance certain yarns.

I have also been working on the knitting machine, and describe two projects, complete with setbacks. My knitting has been hampered by various things: focus [I am also weaving, spinning and sewing]; yarn, despite the huge amounts I currently store; and the site of my machine, in a garden workshop, where our trees are currently shedding pollen and contributing to my hay fever issues. Hence the setbacks.....but I eventually had to add a pattern, as I started knitting again.

Stay safe!
Lynda Fiendley

Composition of Yarns

Yarn can be made out of just about anything, it seems, what follows is just a sample!

For more information, you can either look at all the links I have included, or the following books, both of which I have and recommend:

The Knitter's book of Yarn: https://www.amazon.co.uk/Knitters-Book-Yarn-Clara-Parkes/dp/0307352161 which is an American guide, with lots of information and a few patterns

The Handknitters Yarn Guide https://www.amazon.co.uk/Handknitters-Yarn-Guide-Visual-Reference/dp/1250003075/ref=olp_product_details?ie=UTF8&me=&qid=1587217850&sr=1-2 an Australian guide, which, despite being for hand knitters contains loads of information

And a shorter [free] guide on this website https://knitlikegranny.com/yarn-types/

Animal, Vegetable or Mineral?
Or a mixture of these?

Animal

Sheep

Wool from sheep is probably the most common animal fibre.
Find out more here:
https://www.britishwool.org.uk/sheep-breeds [for information on different breeds and types of wool], and why not investigate the whole site, it also has an educational part, which is interesting. And this site https://www.heddels.com/2016/09/know-your-wools-cashmere-lambswool-angora-and-more/ also discusses other animal fibres.

Goats

Some goats have thick hairy coats and you can find more about different breeds here:

https://www.britishgoatsociety.com/about-us/breeds/

Mohair and cashmere come from the angora goat.

Alpaca, Llama and Camel

Alpacas are, increasingly, being farmed in the UK for their hair. The yarn produced is soft and fine, depending on the age of the animal, and very warm.

Llamas are bigger, produce less fleece, but they are used for yarn production: the difference is explained in brief here:

https://jamescoxknits.com/blogs/news/alpaca-or-llama-is-there-a-difference

Camel hair is also used to make very soft, warm yarn, which is described here:

https://figtreeyarns.co.uk/everything-you-need-to-know-about-camel-wool/

Other animal sources

Rabbits [mostly angora rabbits] have fur which can be spun into a very soft, fine yarn.

Some people spin dog hair, from breeds such as Samoyed.

Buffalo hair is highly prized, very warm and fine: it can be dangerous to collect, which adds to its cost!

Likewise musk ox hair [qiviut] is very expensive, warm, fine and extremely risky – these animals are very dangerous and nervous around humans

Yaks are also a source of warm, fine hair: also expensive and quite rare in this country.

Silk

Silk is harvested from the silkworm, of which there are different species. There are two main types, from which you may get yarn in this country:

The Bombyx mori moth [also called the mulberry silk moth] is cultivated to produce cocoons, which are collected and then processed as explained here: https://www.biddlesawyersilks.com/how-is-silk-made-a-step-by-step-guide/ and here: http://www.wildfibres.co.uk/html/mulberry_silk.html Tussah silk is harvested from wild tussah moths and is not as fine. More information here: http://www.wildfibres.co.uk/html/tussah_silk.html

Spiders also produce silk: I don't think it's been used for knitting but https://www.vam.ac.uk/articles/golden-spider-silk

Chitin

Chitin is not an animal but is a component of the exoskeletons of sea creatures such as crabs, and is used to manufacture yarn, usually by blending it with other fibres. It has antibacterial properties: more information, briefly, here: https://www.aknottyhabit.com/shop/Yarn/By-Fiber/Chitin.htm

Milk can also be processed to make yarn: more information here https://sewport.com/fabrics-directory/milk-fabric

Vegetable

Cotton

is probably the most common vegetable fibre used by machine knitters. For more information on the ethics of cotton https://www.ethicalconsumer.org/fashion-clothing/ethics-cotton-production

Bast fibres include linen, hemp, banana and ramie, amongst others, and are made from the fibrous stems of these plants. Bamboo can be produced like this, too, but some is made by the viscose method. They are usually quite stiff before washing, but can become very soft and drape well. https://www.textileschool.com/406/natural-cellulosic-bast-fibres/

Viscose is actually a production method, rather than a fibre, and lots of different kinds of material is processed in this way. The material is made into a liquid form using chemicals, then forced through spinnerets to make filaments of yarn, before twisting into yarn itself. https://www.contrado.co.uk/blog/what-is-viscose/

Mineral

Oil based yarns include acrylic, nylon and polyester, amongst others and are made by the spinneret method described for viscose, above.

Wire is not really yarn, but can be knitted!

Ethics

There are a number of issues about sustainability, human and animal welfare and effect on the environment. I have summarised some of them here: please note, I am not moralising, I have used all of these fibres in knitting and spinning, but it pays to think about it sometimes!

Fibre	Pros	Cons
Wool and other animal hair	Sustainable, biodegradable **But** superwash wool is made using chemicals to strip it of scales and plastics to coat it!	Effect on the animal: some practices deemed cruel: sheep shearing/ mulesing [but see this http://www.woolsack.org/welfare about UK sheep/ boiling 'live' mulberry cocoons etc
Cotton	Sustainable? and biodegradable	Cotton growing requires huge amounts of water, non-organic cotton uses lots of pesticides, too, and the industry employs some questionable labour practices https://goodonyou.eco/how-ethical-is-cotton/
Bast fibres	Sustainable and biodegradable link	Some of them use chemicals in production: hemp is one which does not, and can be easily machine knitted : available from here, I have knitted their finest yarn with two ends at T7 for a '4 ply'. I would recommend getting two cones, as winding is a nightmare! Undyed is cheap, and can be dyed with cold water dyes [Procion MX]. After washing, hemp becomes soft, it appears like string before!
Viscose type	Sustainable and biodegradable…but	Mostly uses harmful chemicals to prepare the fibre before spinning: some research being done to improve this: and lyocell is an example of such a product https://en.wikipedia.org/wiki/Lyocell also known as tencel.
Oil based fibre	Easy to use, cheap, easy to wash	Not sustainable or biodegradable, and vastly contributing to plastic particles throughout the natural world.

Or look at this summary
https://ecocult.com/the-best-sustainable-and-ethical-knitting-yarns-for-your-next-project/

Measurement of Yarn

Yarn can be measured by weight, length and thickness.

Weight

This is probably the easiest to understand: you can buy a cone of yarn and it will probably be measured by weight. But this does not tell you very much, unless you know the other measurements.

Length

Lots of yarn is also labelled with its length, or maybe with its length per kilo or 100g. This is a good indicator of what you can use it for, but it will also vary, depending on the yarn composition: cotton weighs more than wool, wool more than acrylic etc.

Thickness

This is often used to describe yarn, but in a very inaccurate way: we talk about 4 ply, for example, when we mean yarn of a certain thickness, but '4 ply' really means 4 single strands of yarn plied together. Few yarns are really made like this.
Another, probably more accurate, way of measuring thickness is wraps per inch [wpi] which involves wrapping the yarn round a ruler and counting how many wraps there are to an inch.

The technology which gives us such diverse and lovely yarn also makes this more complicated [like much technology!] But there is a little help to be found….

The American Craft Yarn Council devised a yarn weight system for hand knitters, which is a somewhat simplistic overview, and is only partially useful for the UK:
https://www.craftyarncouncil.com/standards/yarn-weight-system
For the UK, this one has been developed
https://www.the-knitting-wool-store.com/yarn-weight-chart.html
Or this one https://www.laughinghens.com/yarn-conversion-chart

And this site discusses the subject in more depth:
https://knittingauthority.com/guides/guide-yarn-weights/

For industrial and machine knitting use, there is much more to learn for a complete overview: this link explains some of it
https://textilestudycenter.com/yarn-numbering-system/ [please be aware there are loads of ads on it and it is a bit irritating, but the information is good!]
And for machine knitting there is this guide:
https://yarn-store.com/machine-knitting/about-knitting-machines/different-yarns-for-different-knitting-machines/

And this might help with using industrial yarn:

Yarn weight	Strands needed to make	'ply'
2/30	1	1 ply
2/16	1	2 ply
2/12	1	3 ply
2/24	2	3 ply
2/10	1	Fine 4 ply
2/20	2	Fine 4 ply
2/30 or 2/32	3	4 ply
2/8	1	4 ply
2/16	2	4 ply
2/24	4	DK
2/12	2	DK

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Texture

The texture of a yarn is normally determined by the way it is spun. I would also add such fluffy yarns as mohair to this category. We are fortunate to have lots of textured yarn available, and it is constantly developing.

Some textured yarns [e.g. Yeoman Grigna] are quite difficult to use on the knitting machine, unless you give them some space [also true of hand spun yarns]. I was advised to use T10 with Grigna when I mentioned this to an exhibitor at Ally Pally once. That makes a lot of difference!

Another problem which occurs often with such yarns is them getting hung up on the gate pegs. It pays to check that this is not happening every few rows, and to use weights and also pull the work down to stop it snagging. Liz Holness suggested to me that using a machine without gate pegs also helped [and I tried this with my Knitmaster mid gauge machine successfully].

Not all textured yarns are troublesome, and some have a small amount of texture, e.g. boucle or Yeoman Sari, which gives a good result in stocking stitch.

Unlike this scarf yarn, which I would not like to use to knit on a machine. Although………

Twist

A note about twist: when yarns are plied, especially for machine knitting, they are 'balanced', as in no longer twisting. If you then use a yarn twister or other way of combining them by twisting, you well get a twisted, unbalanced yarn! Nothing wrong with that, as such, but there may be a biasing effect when knitted – just something to watch out for.

Yarn Substitution

This is certainly something to consider when looking at patterns. The problem with publishing patterns is that often the yarn you use becomes obsolete before your pattern does.

The following sites provide some ideas about substituting yarns
 https://www.knittingbrain.com/yarns.php

https://www.sistermountain.com/blog/making-yarn-substitutions

but, briefly, you need to match, as closely as possible, the yarn length to weight ration: e.g. a yarn which is about 400 metres long for every 100g would be substituted by one which has equivalent measurements. The next consideration is composition, which is trickier, as yarns often behave quite differently. But swatching helps.....

Punch card explanation

2) Relation between holes and knitting is as follows.	PUNCHED HOLE	UNPUNCHED
TWO COLOR	Needle knits yarn in thread mouth B	Needle knits yarn in thread mouth A
SLIP	Needle knits normally	Needle does not move Yarn lays across front of work
TUCK	Needle knits normally	Needle comes forward enough to catch new loop of yarn still holding old stitch
WEAVING	Weaving yarn lays over needle	Weaving yarn lays under needle
LACE	Stitch transferred	

Whilst looking for information, I found this reproduced chart, which explains how punch cards affect the way the machine knits:

Although off topic, I thought it worth including, and relevant to my tuck stitch project, which follows.

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Projects

Although I have tried two projects, I did only complete one, but have included the idea for the first one, even though I did not finish it!

Lace cardigan

This one was based on a cardigan I knitted years ago, and which I then knitted for most of my colleagues, as it was admired so much.

Basically, I took a cardigan pattern and knitted a waist length, straight style, with short straight sleeves. Up to the armhole, on body and sleeves, I knitted lace using the lace carriage. The rest was stocking stitch. I knitted in Panama, which had its issues: Panama is multi stranded and splits easily, which caused quite a lot of false transfers in the lace. I managed to knit about ten of these, I don't know how I had the patience.

So, for now, I thought I would use lambswool. Unfortunately, my lambswool kept breaking, so I gave up on that. I then tried Sari, which I did not like and neither did the lace carriage. I would have used cotton but did not have a colour I wanted to use. If this is an idea you would like to try, I would recommend cotton, or Panama, which does look good, but you need patience!

Cardigan with tuck lace peplum/skirt

This one was not without its issues, but most of these were user error!

First, I used the following source for my cardigan pattern: http://www.longbuckbymk.com/index.php?option=com_content&view=article&id=174:basic-4-ply-patterns&catid=51&Itemid=114

I knitted a waist length cardigan with set in sleeves. I marked the cast on edges of the cardigan body with markers where I wanted to put godets in my skirt, in my case, I had 2 on each front, and 5 across the back. I did not have any hems.

I tried my lambswool again, and had the breaking issues, so I rewound the yarn [there was no issue there] and sprayed it with silicone, which did work. It was just old and dry, like me!

I made up the cardigan, which also was a disaster, as I joined the shoulders on the machine, managing to put each side on the wrong shoulder, and then having to dismantle and reknit by hand. I have a mental block about this, I do it every time with cardigans, and I make a lot of effort to avoid it! I think this time it was probably the effect of the antihistamines.

Then I used the punch card from this pattern
http://www.longbuckbymk.com/images/stories/patterns/tuck%20lace%20scarf.pdf

as a basis for the peplum/skirt.
I arranged about 120 needles for tuck lace, as detailed in the pattern. My stitch count was altered as I arranged the stitches, because I wanted to have a single needle isolated at each end, to neaten the ends.

Then I proceeded with casting on and knitting in tuck: I used T7 like the cardigan, but if I did this again, I would use T9 or even T10, as the lambswool bulks up with washing. At the left end, I picked up from the left front edge of the cardigan every other row.

At my marked godet points, I knitted using holding position. With the carriage on the right, I put half of the needles into hold on the left side. I then knitted on, bringing a group of three needles into hold on alternate rows. When I had all but one group in hold, I then knitted on, putting one group back into work on alternate rows. Then I cancelled hold and carried on.

This was quite simple, with no wrapping needed, but I did have to make sure I used and moved weights.

When I had finished picking up from the cardigan, I cast off.

In retrospect, I would use a looser tension for the tuck lace and put more needles into hold for the godets – perhaps 3/4 rather than 1/2.

To finish, I used a crochet edge all round. But you could use these edgings on the machine:

https://houstonareamachineknitters.weebly.com/mock-cable-and-worm-edging.html

Patterns

Pat has been working on a pattern for a child's pullover. She has knitted this prototype, but the pattern will be available soon. [Watch this space! 👁👁] The clever part is the sleeve setting, which allows for great stripe matching.

Pat also sent me a link for these needles: https://justknotsyarn.com/clover-tapestry-needle-chibi-bent-tip which I used to do the mattress stitch sewing on these cardigans. Much easier to pick up the stitches!
Or https://justknotsyarn.com/hamanaka-bent-tip-darning-needle

And since I thought I had finished this newsletter, I have also finished three cardigans for my second grandson, Anthony, who was born in February. Since the lockdown started, he has grown so much that my daughter-in-law asked me to knit for 6-month size. These are the result:

On the left is my machine knit version [pattern below]; the centre one is basically the same pattern in a hand knit version; and the one

on the right is a hand knit from a free Ravelry pattern https://www.ravelry.com/patterns/library/baby-jacket-with-moss-stitch-edges
In case anyone decides to tackle it, the pattern states it takes 150g of yarn, where mine took 75g!

Raglan cardigan for 6-month-old baby

I knitted all of the cardigans in sock yarn: this one was in Drops Fabel, which is inexpensive. I would use any sort of sock yarn, for any of these patterns without worrying too much about tension.
I finished the front and neck band by hand in garter stitch, but on the machine would be quick!

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YARN: Drops Fabel; 2 balls 100g

GAUGE DATA: Gauge (Stocking stitch over 4 in = 10 cm): 30.0 sts by 42.0 rows. Body T7/ Hem T6

FINISHED DIMENSIONS: (ins): … with Moderate fit.   Chest: 21.8 inches

BACK:
1. Cast on 84 sts in WY, using TD6 and open edge method. Work 6 rows, ending COR. Change to MY. Work even for 18 rows. You may wish to work a turn or picot row halfway. To complete the hem, graft the cast-on sts to the last row worked.
2. Change to TD7 and Stocking stitch, RC000. Work 52 rows. COR.
3. Armhole shaping. Cast off 4 sts at beginning of next 2 rows.   COR.
4. Raglan shaping. Dec 1 st at armhole end(s) of every 3rd row 8 times, then dec 1 st at armhole end(s) of every 2nd row 11 times.
5. Total 100 rows with 38 sts remaining for back of neck. Place sts on holder.

FRONT: Cardigan right side worked first.
1. Cast on 41 sts in WY, using TD6 and open edge method. Work 6 rows, ending COR. Change to MY. Work even for 18 rows. You may wish to work a turn or picot row halfway. To complete the hem, graft the cast-on sts to the last row worked.
2. Change to TD7 and Stocking stitch, RC000. Work 52 rows.
3. Armhole.   Dec for armhole at right end, as for back. Continue until 80 rows total, with 28 sts remaining. Then shape neckline as follows, continuing raglan shaping AT THE SAME TIME.
4. Shape neck. COR. Thread left 8 sts to WY.   Continue armhole shaping. Dec 1 st at neck edge (left end) every row 8 times, until 7 sts remain.
5. Work 12 rows even at neckline, continuing shaping at armhole. Total 100 rows. Cast off remaining 2 sts.
6. Left cardigan front. Work as for right side, reversing shapings.

SLEEVES:
1. Cast on 44 sts in WY, using TD6 and open edge method. Work 6 rows, ending COR. Change to MY. Work even for 12 rows. You may wish to work a turn or picot row halfway. To complete the hem, graft the cast-on sts to the last row worked.
2. Change to TD7 and Stocking stitch, RC000.
3. Inc 1 st at each end of every 10th row 5 times to 54 sts (50 rows total).
4. Work even to total 60 rows. COR.
5. Shape cap. Cast off 4 sts at beg of next two rows (46 sts rem). Dec 1 st at each end of every 3rd row 4 times, then dec 1 st at each end of every 2nd row 17 times. Total 108 rows. COR. Cast off remaining 4 sts loosely.

SHOULDER SEAMS:
1. Sew sleeves to fronts and back, along raglan armhole seams.

ROUND (CREW) FRONT NECK DOUBLE BAND COLLAR:
1. Bring out 84 needles to HP. With wrong side of work facing, and doubling every 7th st, rehang 8 sts from right front neck holder, 17 sts from right front neck edge, 2 sts from right sleeve, 34 sts from back neck

holder (extra sts from holder(s) should be incorporated into shoulder seams or doubled), 2 sts from left sleeve, 17 sts from left front neck edge and 8 sts from left front neck holder. Hang weights. Push needles to FWP, latches open. Use TD6 with COR.
2. Work 16 rows. After 8 rows, optionally work a row of picot (lace holes every 2 sts), then continue in plain knit for the remaining rows. Cast off loosely.
3. Finishing. Fold collar band to the inside, and stitch in place to the neckline.

BUTTON BAND:
1. Start with left front for girls/women, right front for boys/men. Using TD6 bring out 77 needles to HP. With wrong side of work facing, hang sts (approximately 4 sts for each 5 rows along cardigan front) between bottom of hem and top of collar band.
2. Work in plain knit for 6 rows. Work a picot row (lace holes every 2 sts), then another 6 rows. Cast off loosely. Fold band to inside and sew cast-off edge to back of picked up sts.
3. Mark positions for 6 buttons, the first one 0.3 ins above the band bottom, the last one 0.3 ins below the band top. The rest should be evenly spaced between these two, approximately 1.7 ins apart.

BUTTONHOLE BAND:
1. Work buttonhole band as for button band, working buttonholes at the marked positions. Check your machine knitting reference book for techniques.
2. Sew buttons at marked positions on the button band, being careful to align buttons with buttonholes.

FINISHING:
1. Sew sleeve top to armhole, easing to fit. Sew side and sleeve seams. Sew any remaining seams.
2. Darn/weave/sew in all loose ends.

Suppliers

These are still operating an online supply

www.wools.co.uk – Uppingham Yarns

https://yeoman-yarns.co.uk/ Yeoman Yarns

https://www.yarnoncone.co.uk Yarn on Cone

and this one deals in recycled fibres https://www.iinouiio.com/

Other information

http://www.knitbritish.net/ep-111/ is an article on machine knitting and a podcast

http://handymachineknitting.libsyn.com is a regular podcast

http://knitwords.blogspot.com/ is a blog

https://www.jessica-tromp.nl/basic_machine-knitting_patterns_free_knittingmachine_patterns.htm is a Dutch website (in English) with lots of free patterns

And Finally

During this crisis, I have been keeping fit! And, I have found it interesting to note how my Fitbit logs energy use during craft activities: here is a rough guide as to how energetic each craft is….

Most energy used: [on a par with brisk walking] weaving [on my floor loom] dressmaking using machinery [must be the lifting and tugging of fabric??] and winding yarn.

Medium: machine knitting [depending on rate] and [fast] hand knitting

Low: Spinning [but I do use an electronic spinner, maybe a treadle wheel would use more]

I would like to involve others in this newsletter, so please let me know of anything I can include
Administrator@longbuckbymk.com is my club email address.