Supporting Biodiversity

Imagine if everything we knitted was the same. Same boring color, same texture, same weight…knitting would lose some of its charm, wouldn't it? Yet, maintaining all of these different kinds of fibers, yarn weights, colors, and types of yarn isn't always going to be a sure thing. In order to be certain there is always a rich choice at the yarn shop, we need to think about where those yarns originate. Once you're knitting with a fabulous new wool, cashmere, or linen yarn, you'll agree. We can't afford to lose any biodiversity on our planet!

The American Heritage Dictionary of the English Language (Fourth Edition) defines biodiversity as, "The variability among living organisms on the earth, including the variability within and between species and within and between ecosystems." Although terms like *biodiversity* or *ecological diversity* sound complicated and may seem a little far from knitting and sustainability, these concepts tie into our yarn (fiber) supply, whether it's derived from animals, plants, or man-made processes. In this chapter I give three examples of popular fibers and how we can support biodiversity. Many of these ideas apply to all fibers, so don't hesitate to ask questions when buying any kind of knitting yarn.

Wool: A Yarn from an Animal

I'll start with an easy example. Many of our fibers come from animals' wool, fiber, or hair. Sheep offer a great diversity of wool from thousands of different kinds of sheep breeds such as Merino, Karakul, or Shetland. Where do all those breeds come from?

People domesticated sheep thousands of years ago for their wool, milk, and meat. The farmers who bred those sheep chose particular attributes which worked well in their geographic areas. In some cases, the sheep evolved into breeds without human intervention. Sheep that have been selectively bred by people or by their environment tolerate heat and cold differently, resist different kinds of diseases, have differing rates of success when lambing, and produce vastly different kinds of wool. Those different kinds of wool are an important example of a benefit to humans from biodiversity. Merino produce soft, fine wool that is ideal for babies or clothing worn next to the skin, but it doesn't wear as well as a slightly coarser wool, like Shetland. By contrast, coarse wool from Karakul sheep is made into many of the carpets that have lasted for generations underneath our feet—but is too itchy to wear next to the skin. Different breeds of sheep are around for important ecological reasons and *diverse* functions.

◀ *Natural green-colored cotton, once rare, is making a comeback.*

As our farming grew more industrialized and global, our breeding did as well. No longer are farmers in one area of the world breeding sheep entirely on their own. Geographic pockets of certain breeds of sheep don't remain isolated and cut off from other parts of the world as before. Sometimes this is good as we can strengthen one breed by cross-breeding with another. However, if we want to maintain some of these fascinating breeds of sheep, we must help support and maintain their existence.

One way to do this is by financial support. Purchase yarn from farmers who raise these rare animals. While it may seem counterintuitive, if you eat meat, consider buying lamb for dinner from those farmers as well. (Freezer lamb exists because 50 percent of lambs born are male, and a farm only needs a ram or two around. Rams can be dangerous to handle, so farmers try to reduce risk to people and other animals in this way.) If consumers demonstrate a demand, farmers will raise more diverse breeds of sheep and these rare breeds will no longer be endangered.

If you live in an urban area and don't bump into any farmers, don't despair! Many companies work on biodiversity, but a well-known one, Rowan yarn, now produces a British Sheep Breeds line of yarns that use a variety of heritage breeds. If you prefer to support a small farm, many of them are on the Web, and you can even find local wool and yarn at this Web site: www.localharvest.org.

Once in danger of extinction, the Navajo-Churro sheep is the oldest heritage sheep breed in the U.S.

How can a knitter find out what breeds need to be supported? Check out the American Livestock Breeds Conservancy in the United States or the Rare Breeds Survival Trust in Britain for more information. Many countries have equivalent rare breed protection efforts. These organizations offer all sorts of information about supporting and maintaining rare breeds of farm animals.

Cotton: A Plant Fiber

When it comes to maintaining our planet's biodiversity, wool is just one example! In fact, globally, far more cotton is used than wool. Therefore, cotton should also be part of a biodiversity solution. Although cotton historically grew in a variety of colors, modern cotton fields are full of snow white bolls. What happened?

Five thousand years ago, native people in South America, Africa, and Asia cultivated natural-colored cottons. These cottons were short stapled (the fibers were short), which required skilled spinners and weavers to process the cotton into usable textiles. Over time, longer stapled white cottons became dominant. These were especially useful when spinning and weaving were no longer done by hand. Industrialization in the colonial period required longer stapled fibers for use in the cotton gin (which removes cotton seeds from the boll by machine), mechanized spinning jenny, or looms.

For a time, white cotton ruled not only in the field but also in legislation. James M. Vreeland Jr. writes in the 1999 *Scientific American* that in 1931, "the Peruvian government had issued a series of laws and decrees aimed at destroying perennial, pigmented forms of native cotton in an effort to protect the all-white varieties that were commercially viable…. Pesticides were liberally applied, and the long-standing, successful tradition of crop rotation was abandoned." A great amount of genetic diversity in cotton (the diversity that enables a variety of colors to exist) was lost during this period. However, despite the dominance of white, long stapled cotton, individual farmers bucked authority and grew colored varieties of cotton in some areas of the world, including Peru, and even Acadian hand spinners in the Mississippi Delta region of the United States. In the Soviet Union during World War II, dyes weren't available, so colored cottons were grown and served as a substitute. At the time, natural-colored cotton wasn't considered commercially viable in the United States.

Today, it's pretty easy to find naturally green cotton jeans in the department stores or organic beige, brown and green yarns in your local yarn shop. How did these long lost varieties of cotton become available again commercially?

In the 1990s, natural-colored cottons became popular again because of increased concerns about pesticides, dye usage, and pollution. This was only possible because of people like James Vreeland, who helped to establish the Native Cotton Project in Peru where colored cottons are again farmed on a larger scale, and Sally Fox, who worked to develop and breed longer stapled colored cottons in the United States. These

efforts to maintain the genetic diversity of cotton also reduce pesticide usage, because some older strains are more resistant to pests and disease than conventional cotton. In a sense, every natural-colored cotton yarn or textile helps to reinforce not just the future biodiversity of cotton, but the biodiversity of the ecosystems that are seriously harmed by pesticides dumped into the environment through conventional cotton farming. You can start by buying natural-colored organic cotton yarns. These are widely available, from Lion Brand and Bernat as well as Pakucho (James Vreeland works with this company), Sally Fox's Foxfibre, Rowan, and many other yarn companies.

Hemp: An Underused Plant Fiber

What about a useful fiber that doesn't require any pesticides and is easy to grow organically? Hemp is an ancient bast fiber, like flax (linen) that is grown all over the world. It tolerates a lot of different soil types, stabilizes the soil, and even draws excess chemical nitrogen from over-fertilized soil, which prevents it from polluting waterways. It feeds lots of wildlife with its seeds…and has the potential to reduce human famines with its high amounts of protein. Hemp produces a fiber that is available now as a great knitting yarn.

The downside to hemp is its relationship to cannabis (marijuana). The United States outlawed the growing of hemp in 1970 even though it has no possibility of causing drug addictions, as its relative, cannabis, does. In fact, the United States historically grew hemp, but is now the only country who outlaws it as a crop. In this situation, supporting the use of hemp can also be a vote for supporting wildlife biodiversity. Buying hemp yarns can be an opportunity to "vote" for hemp. In no way does a vote for hemp support drug use; fiber-producing hemp can't get anyone high except for knitters, who love the yarn it produces! Some companies producing hemp yarns include Hemp for Knitting, EnviroTextiles LLC, Hemp Traders, and The House of Hemp.

If you can't get your hands on hemp yarns, consider linen or ramie yarns as a substitute. The yarn qualities are much the same: hard-wearing and strong plant fibers. You'll be helping to maintain plant fibers used for textiles for thousands of years.

Supporting our planet's biodiversity for knitters means we should support, maintain and discover the miraculous fiber capabilities on our planet. From sheep breeds to hemp to cotton varieties, we have enormous natural opportunities when it comes to fiber. If we want to keep all those varieties around, we must sustain the farmers who support older and heirloom varieties, as well as taking care to choose rare and diverse fibers.


Hemp Placemats

Hemp Placemats

Hemp is the ideal fiber for table linens because it's hardwearing, machine washable, and crisp. Many placemats available in stores can't be washed, which seems entirely counter-productive, given their purpose on the dining table. Beyond practicality, these placemats have style, too. Choose two bright colors that coordinate with your décor or rely on a single color and let the stitch pattern's texture shine through. Ideal for all sorts of entertaining, these placemats might look especially nice with glass dishes in particular. Bon appétit!

Skill Level

Easy

Size

One size

Pattern makes 4 placemats

Finished Measurements

12" × 17" (30.5cm × 43.2cm)

Materials

- Color A: 2 skeins of Lanaknits Designs Hemp for Knitting allhemp6 yarn, 100 percent Hemp, 165 yd. (150m), 3½ oz. (100g), color 027 Aubergine
- Color B: 2 skeins of Lanaknits Designs Hemp for Knitting allhemp6 yarn, 100 percent Hemp, 165 yd. (150m), 3½ oz. (100g), color 019 Sprout

or

- 330 yd. (300m) each of any 2 colors of machine washable DK weight yarn with the appropriate gauge

or

- 660 yd. (600m) of any 1 color of machine washable DK weight yarn with the appropriate gauge
- U.S. size 5 (3.75mm) straight or circular needle, *or size to obtain gauge*
- Row counter
- Tapestry needle
- Blocking pins

Gauge

18 sts and 25 rows = 4" (10cm) over Placemat patt rep

Pattern Stitches

Placemat Pattern

Worked over a multiple of 4 sts.

With Color A:

Row 1 (WS): *P2, k2, rep from * to last 4 sts, p2, k1, wyif sl1 pwise.

Rows 2 (RS) and 3 (WS): Work as for Row 1.

Row 4 (RS): *K2, (yo, k2, pass yo 2 sts),* rep from *.

Rows 5, 6, 7: Work as for Rows 1–3 above.

Change to Color B:

Row 8 (RS): Knit.

Row 9 (WS): Work ribbing opposite to Color A, as follows:

*K2, P2, rep from * to last 4 sts, k2, p1, wyif sl1 pwise.

Rows 10 (RS) and 11 (WS): *K2, p2, rep from * to last 4 sts, k2, wyif sl1 pwise.

Row 12 (RS): K2, *k2, (yo, k2, pass yo 2 sts),* rep between * to last 2 sts, k2.

Rows 13, 14, 15: Work as for Rows 9–11 above.

Rows 16–22: With B, work St st (knit 1 row, purl 1 row).

Change to Color A:

Rows 23–30: Work St st, beg with purl row.

Instructions

note When switching colors, cut yarn, leaving tail at the end of a row. At the beginning of a row where you have left a tail, work in ends as you knit, twisting the tail with the working yarn behind stitches on WS as you go.

Make Four

CO 56 sts.

Work Placemat Patt Rows 1–30 three times.

Work Placemat Patt Rows 1–15 one time.

BO.

Finishing

Weave in ends, if necessary. Wet block by dampening placemat. Pin flat to dry.


Zafu: A Churro Cushion

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A zafu is a thick, round meditation cushion, ideal for sitting on the floor. This Asian-inspired cushion is ideal for your couch, for use as an ottoman, or for additional seating. Hardwearing Navajo-Churro rug yarn works well if you'd like a cushion that lasts. Purchasing this rug yarn helps maintain the Navajo-Churro sheep, king of the Southwest rug tradition and a rare breed sheep. Knit in the round, you build this cushion as you go and choose how tall to make it, how to stuff it, and even the perfect buttons. At last, knitting as interior decoration that also helps promote sustainability!

Skill Level

Easy

Size

One size

Finished Measurements

Diameter: 15" (38cm)

Height: 6½" (16.5cm)

Roughly 47" (119.4cm) in circumference

Materials

- 2 skeins of Bayeta Gordo yarn, 100 percent Navajo-Churro Rug Weight Wool, 400 yd. (366m), 16 oz. (454g), color Sand

or

- 800 yd. (732m) of any rug weight or bulky yarn with the appropriate gauge
- U.S. size 11 (8mm) double-pointed needles
- U.S. size 11 (8mm) circular needle, 40" (102cm) long, *or size to obtain gauge*
- 7 stitch markers
- Tapestry needle
- 9" (23cm) matching zipper
- Stuffing (see note): Wool batting or roving, eco-friendly fiber fill, or Organic Cotton stuffing
- Sewing needle and matching thread
- 2 buttons, 1" (25mm) diameter

note Zafu cushions are traditionally stuffed with buckwheat or kapok. I have suggested using natural fibers or recycled fibers for stuffing this cushion. (See chapter 4 for more information about environmentally friendly stuffing options.) Other options include cutting up old T-shirts and other rags to use as stuffing for this cushion. If you should choose to use buckwheat or kapok,

it might be necessary to create a liner inside of the knitting to keep the stuffing from poking through the knitted fabric.

Gauge

10 sts and 12 rows = 4" (10cm) with 2 strands of yarn in stockinette stitch

Pattern Stitches

Fabric Stitch

Worked over an odd number of sts.

Rnd 1: *K1, sl1 wyif, rep from * to last st, k1.

Rnd 2: K1, *k1, sl1 wyif, rep from *.

Rep rnds 1 and 2.

Instructions

Cushion Bottom

Using 2 strands of yarn, CO 6 sts on 1 dpn. Kf&b in each st, for a total of 12 sts.

Distribute the sts evenly on 3 dpns. There will be 4 sts on each needle. Join and pm. (Clipping a safety pin or open-ring marker into the fabric may be the easiest way to mark this beg of rnd.)

Rnds 1–4: Knit around working kf&b in last st at the end of each needle; at the end of rnd 4 there will be a total of 24 sts.

Rnd 5: *K3, kf&b in next st, pm, K3, kf&b in last st at the end of the needle,* rep 2 more times.

Continue knitting in the round, always kf&b in last st before marker and in last st at the end of the needle.

When sts become too crowded on dpns, change to circular needle, adding 3 markers to mark the inc points previously at the ends of the dpns.

Continue increasing in the same fashion until there are 120 sts, with 20 sts in each section between markers.

At beg of next rnd, inc 1 st for a total of 121.

Knit 1 rnd even, removing all markers but the first, which marks the beg of the rnd.

Cushion Sides

Work Fabric Stitch patt. When Fabric Stitch section measures 5½" (14cm), work zipper opening as follows:

Zipper Opening

At beg of next rnd, BO 24 sts. Work the rest of the rnd in Fabric St.

At beg of next rnd, CO 24 sts. Work the rest of the rnd in Fabric Stitch patt, as established.

Work 3 more rnds in Fabric Stitch patt.

Stitch-In Zipper

With zipper closed and RS of ½ of zipper facing RS of 1 edge of opening on cushion, using matching sewing thread and needle, attach zipper with a running st to that side of the zipper opening (see Figure 1). Unzip the zipper to st the other half of the zipper along the second edge of the opening—RS to RS (see Figure 2). Reinforce the zipper by doing a second seam with whip st on the WS. Tuck the zipper ends to the inside of the opening and tack them down (see Figure 3).

Cushion Edge

Continue working in Fabric Stitch patt until cushion side measures 6½" (16.5cm) or desired height.

At beg of next rnd, dec 1 st for a total of 120.

Knit 1 rnd even.

Cushion Top

At marker, sl1, k1, psso, k19. *Pm, sl1, k1, psso, k18, rep from * to end of rnd.

Continue knitting in round, always slipping 1, k1, psso after marker.

Change to working with dpns when there are too few sts to work comfortably on the circular needle.

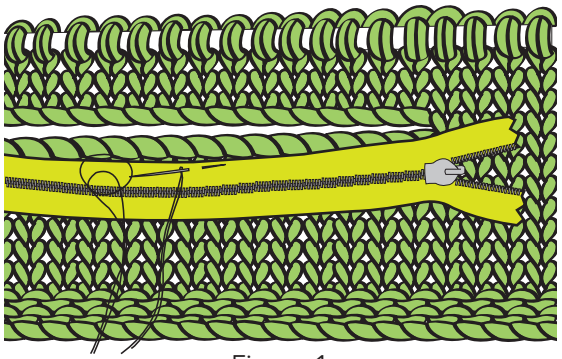

Figure 1

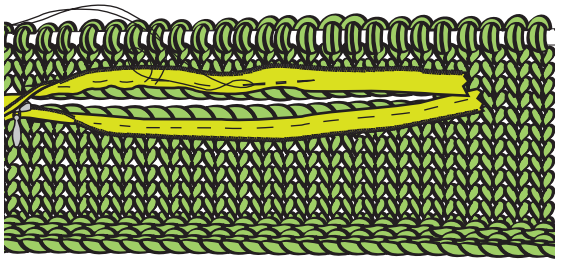

Figure 2

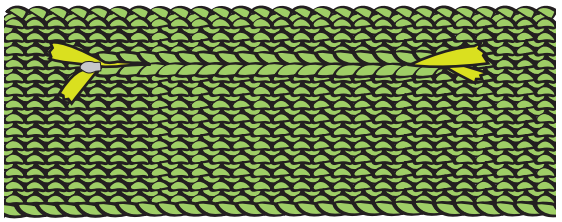

Figure 3

When your hand will still fit comfortably through the cushion top, stop knitting and stuff cushion (adjustments can also be made through the zipper.).

Continue knitting and decreasing as above, until 1 st is left in each section (total of 6 sts), removing markers on this rnd.

Next Rnd: *Sl1, k1, psso, around (3 sts rem).

Next Rnd: Sl1, k1, psso, k1 (2 sts rem).

Next Rnd: Sl1, k1, psso (1 st remains). BO last st.

Finishing

With tapestry needle and 1 strand of matching yarn, close up CO edge in Cushion Bottom.

Weave in ends.

Dampen or spray with water to block.

Shape cushion while damp to make the shape you'd like; add additional stuffing through zipper opening if necessary. Allow cushion to dry; it will hold shape.

With matching thread and needle, sew on buttons to cover the CO and BO and to add a slight dimple to the cushion's center.