Spumellariinid
Hexacontium laevigatum
A Radiolarian Knitting Pattern Demonstrating Radial Symmetry
by Naomi Spinak, Science Fiber

FINISHED SIZE:
Approximately 13 1/4 inches from tip to tip. The center body is around a 6” diameter.

YARN:
Brooklyn Tweed Quarry chunky weight American wool in Gypsum. You will need about 100 yards or 50 grams of yarn to complete this project. If you use a different yarn, go down 1-2 needle sizes from the ball band suggestion to get a fabric that will hide stuffing well.

NEEDLES AND NOTIONS:
US Size 7 Double Point Needles. I used Karbonz because the strength of those needles is very helpful when turning small pieces frequently and using stuffing.
Darning needle for weaving in ends
Locking markers
4 oz wool roving or fiberfill

GAUGE: 16 sts to 4 inches in pattern. If you use a yarn with a different gauge, you will get a different sized microfossil, but it will still work.

SKILLS NEEDED: Intermediate Level. Knitting in the round on double points, following a texture pattern.

GLOSSARY:
P=Purl
K=Knit
PFB=Purl front and back of same stitch to increase.
KFB=Knit front and back of same stitch to increase.
K2Tog=Knit 2 stitches together to decrease.
P2Tog=Purl 2 stitches together to decrease.
YRN: Yarn over

STAGGERED BAMBOO STITCH PATTERN:
ROUND 1: K1, *YRN, K2, Pass YRN over K2, *repeat to last stitch in round, K1
ROUND 2: YRN, K2, Pass YRN over K2, repeat to end of round
Instructions:
Start the first spine:
Cast on three stitches on double point size 7 needles or size needed to get your gauge. Join in the round. This will be tricky but it will get easier as you increase. Place a marker to indicate the beginning of your round.
Round 1: Purl
Round 2: Increase Round: PFB in each stitch. (6 stitches total)
Round 3: Purl
Round 4: Increase Round: *P1, PFB* to end. (9 stitches total)
Purl in the round until your pseudopod is about 3.5 “ long from cast on. Thread the cast on yarn onto a darning needle and thread through the end to close. Draw end inside to hide.
Take a small pinch of stuffing (olive sized) and stuff it down inside of the tip with a spare knitting needle. Continue to add bits of stuffing until the tube holds its shape.
Purl until the spine is approximately 4.25 inches from cast on. Continue stuffing.

Next round: Start the capsule or shell.
Round 1: Increase round: PFB in every stitch (18 stitches total)
Round 2: PATTERN ROUND 1
Round 3: Increase round: *K1, KFB* repeat around (27 stitches total)
Round 4: PATTERN ROUND 2 to last stitch, P1
You will need to shift stitches from needle to needle to easily complete pattern, you can switch them back to even up the needles, or leave them as is as you continue
Round 5: Increase round: *K2, KFB* repeat around (36 stitches total)
Round 6: PATTERN ROUND 1
Round 7: Increase round: *K3, KFB* repeat around (45 stitches total)
Round 8: PATTERN ROUND 2 to last stitch, P1
Round 9: Increase round: *K4, KFB* repeat around (54 stitches total)
Place a marker at the beginning of the next round
Round 10: PATTERN ROUND 1
Round 11: Knit
Round 12: PATTERN ROUND 2
Round 13: Knit.
Repeat rounds 10-13 until the section measures 2” from the marker. Finish after a PATTERN ROUND 2.
Next: Decrease round 1: *K4, K2Tog* Repeat around. (45 stitches total)
Round 2: PATTERN ROW 1
Round 3: Decrease round *K3, K2Tog* Repeat around (36 stitches total)
Round 4: PATTERN ROUND 2
Round 5: Decrease round: *K2, K2Tog* Repeat around (27 stitches total)
Stuff body until it holds shape.
Round 6: PATTERN ROUND 1
Round 7: Decrease round*K1, K2Tog* Repeat around (18 stitches total)
Continue to stuff.
Round 8: PATTERN ROUND 2
Round 9: Decrease round: *K2Tog* Repeat around (9 stitches total). Place a marker.
Make next spine by purling in the round until you have 4” from end of the body marker. Stuff.
Next round: *P2Tog, P1* Repeat around.
Round 2: Purl
Round 3: P2Tog all around.
Cut yarn, thread end onto a darning needle and pull through stitches to close, then through toy to hide the end.

Additional spines:
Pick up 3 YRN loops on each of 3 double point needles from the center of one side of the shell body.
Place a marker at the beginning of the round.
Purl for 4”
Stuff spine. Next round: *P2Tog, P1* all around. Last round: *P2Tog* all around, cut yarn, thread on darning needle and close end, pull yarn through toy to hide and clip end of yarn. Repeat this spine three more times to create a six-pronged spumellariniid or as many as you would like (in multiples of two) for another type.

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