The Life Cycle of the Swallowtail Butterfly

Inspired by the wonder of metamorphosis, this embroidered panel features the stages of the life cycle of the Swallowtail Butterfly, *Papilio machaon* – ovum (egg), larva (caterpillar), chrysalis (pupa) and imago (butterfly): nestled within the stems, buds and flowers of the preferred host plant, Milk Parsley, *Peucedanum palustre* (also known as Marsh Hog's Fennel).

Worked on ivory satin, in stumpwork and surface embroidery, this design contains beaded eggs, caterpillars in various stages of development, a pupa worked in padded gold kid, and a butterfly with raised detached wings. The Milk Parsley stems, leaves, buds and flowers are embroidered with silks and beads.

Swallowtail Butterfly, Papilio machaon

The swallowtails, so-called as most have extensions on the hind wings which give the appearance of a swallow's tail, may be found in temperate or tropical zones of most countries. The **Swallowtail**, Papilio machaon, is one of the most handsome of the species. Also known as the Common Yellow Swallowtail and Old World Swallowtail, this striking butterfly is yellow with black wing and vein markings and a wingspan of 8-10 cm (3-4 in). The hind wings have a prominent tail which features a distinctive red and blue eye-spot. The butterfly has a strong and fast flight, but frequently pauses to hover over flowering umbelliferous plants such as fennel, parsley and dill and sip nectar.

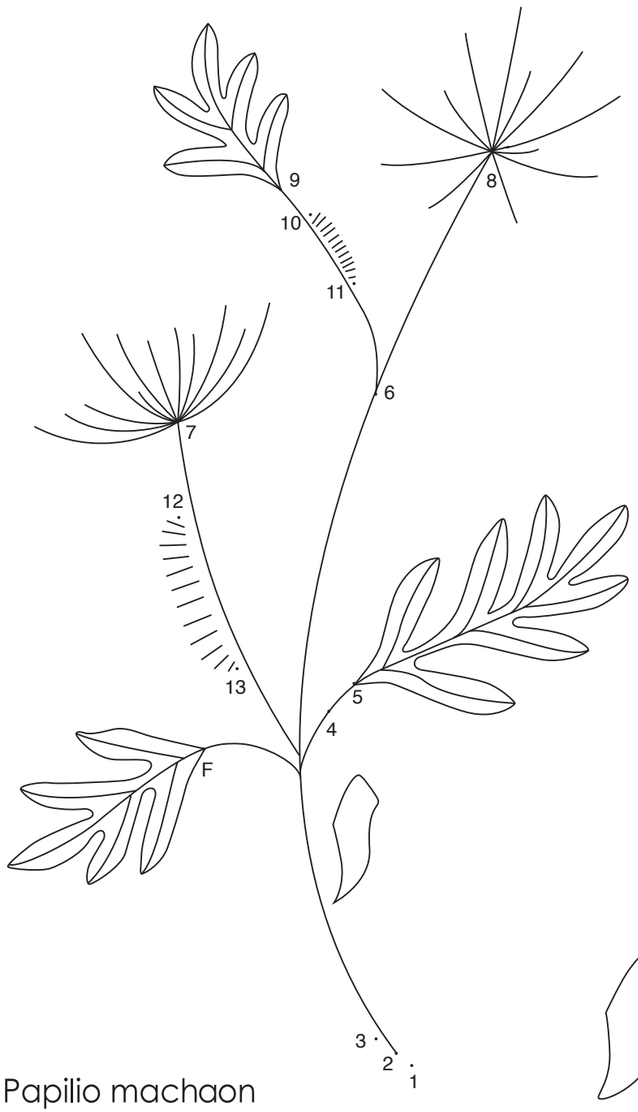
Swallowtail Butterfly, *Papilio machaon*

Milk Parsley, Peucedanum palustre

Milk Parsley, Peucedanum palustre (also known as Marsh Hog's Fennel), is the preferred host plant for the British race of the Swallowtail Butterfly, found only in marshy areas such as the Norfolk Broads. The term 'milk' refers to the white sap found in the hollow, ridged stems of this plant, while 'parsley' references the deeply indented leaflets which are said to resemble parsley. As Milk Parsley is an umbelliferous plant, the bud and flower stalks all join in an umbrella-like fashion at the end of the stems.

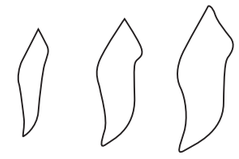
Milk Parsley, *Peucedanum palustre*

Diagrams Actual Size

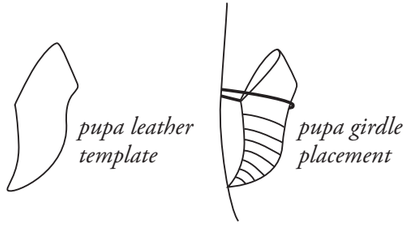


Papilio machaon

skeleton outline



pupa padding outlines



pupa leather template

pupa girdle placement

Overall Requirements

This is the complete list of requirements for this embroidery. For ease of use, the requirements of each individual element are repeated under its heading—for example, Milk Parsley requirements, Caterpillar requirements.

ivory satin background fabric: *35 cm (14 in) square*
quilter's muslin (or calico) backing fabric:
35 cm (14 in) square
tracing paper *(I use GLAD Bake/baking parchment)*

quilter's muslin: *20 cm (8 in) square*
gold kid:
5 cm (2 in) square (colour kid green if desired: Copic G99 Olive)
yellow felt: *5 x 8 cm (2 x 3 in)*
paper-backed fusible web: *5 x 8 cm (2 x 3 in)*

28 cm (11 in) embroidery hoop or stretcher bars
13 cm (5 in) embroidery hoop

needles

crewel/embroidery sizes 3–10
milliners/straw sizes 1 and 9
sharps sizes 10 and 12
tapestry size 26 or 28
chenille size 20
sharp yarn darners sizes 14–18
embroidery equipment *(see page 264)*

3 mm bronze/purple bead *(Hot Spotz SBXL-449)*
Mill Hill seed beads 0479 *(white)*
Mill Hill seed beads 3021 *(ivory)*
Mill Hill seed beads 0128 *(yellow)*
Mill Hill seed beads 0367 *(garnet)*
Mill Hill petite beads 40374 *(bronze/purple)*

33 gauge white covered wire:
four 15 cm (6 in) lengths (colour sections of wire dark grey if desired: Copic W7 Warm Grey)

thin card (manila folder weight):
14 x 20 cm (5½ x 8 in)
heavyweight (110 gsm) tracing paper
translucent removable tape
(e.g. Scotch Removable Magic Tape)

Thread

Note: DMC colour equivalents are close but not always an exact match for the Soie d'Alger and Cifonda colours used.

very dark green stranded thread (stems):
Soie d'Alger 2126 or DMC 3345
dark green stranded thread (stems, leaves):
Soie d'Alger 2125 or DMC 3346
medium green stranded thread (stems, leaves, buds):
Soie d'Alger 2124 or DMC 3347
light green stranded thread (stems, buds, flowers):
Soie d'Alger 2123 or DMC 3348
very pale green stranded thread (flowers):
Soie d'Alger 241 or DMC 772
cream stranded thread (flowers):
Soie d'Alger Crème or DMC 3865
white stranded thread (flowers):
Soie d'Alger Blanc or DMC Blanc

lime green stranded thread (caterpillar):
DMC 907
black stranded thread (caterpillar): *DMC 310*
orange stranded thread (caterpillar): *DMC 946*
burnt orange stranded thread caterpillar):
DMC 900
pale grey stranded thread (caterpillar):
DMC 762 (pale grey)

black stranded thread (butterfly):
Cifonda Art Silk Black or DMC 310
dark grey stranded thread (butterfly):
Cifonda Art Silk 215 or DMC 317
light yellow stranded thread (butterfly):
Cifonda Art Silk 1114 or DMC 744
medium yellow stranded thread:
Cifonda Art Silk 1116 or DMC 743
blue stranded thread (butterfly):
Cifonda Art Silk 989B or DMC 796
red stranded thread (butterfly):
Cifonda Art Silk 254A or DMC 817
medium brown stranded thread (butterfly):
Soie d'Alger 4534 or DMC 610
dark grey stranded thread (butterfly):
Soie d'Alger 3446 or DMC 3799
ecru stranded thread (butterfly): *DMC Ecru*

slate/gold metallic thread (butterfly):
Madeira Metallic No. 40 col. 484
dark grey metallic thread (caterpillar):
Madeira Metallic No. 40 col. 360
gold/black metallic thread (pupa):
Kreinik Cord 205c
iridescent white metallic thread (pupa):
Couching thread 371 col. White Opal
gold sewing thread (pupa):
Gutermann Polyester col. 488 sewing thread (Gold)
variegated brown/grey chenille thread (butterfly):
col. Hunter Olive
medium green soft cotton padding thread (stems):
DMC Soft Cotton 2470
lime green soft cotton padding thread (caterpillar):
DMC Soft Cotton 2142
grey-green rayon machine thread (scientific name):
Madeira Rayon No. 40 col. 1062
silk tacking thread
nylon clear thread:
Madeira Monofil 60 col. 1001

Preparation

1. Mount the satin background fabric and the cotton backing into the 28 cm (11 in) embroidery hoop or frame. The fabrics need to be kept very taut.

2. Cut a rectangle from thin card, 14 x 20 cm (5½ x 8 in). Place this rectangular template on the satin (checking that it is aligned with the straight grain of the fabric) and insert a fine needle at each corner point. Remove the template. Using fine silk or rayon machine thread in a sharps needle, make long stitches from each corner point, to form a stitched rectangle on the front fabric. This will be used as a reference grid when transferring the skeleton design outline and the line for the name of the butterfly (optional).

3. Using a fine lead pencil, trace the skeleton outline and rectangle outline of the design onto tracing paper. Do not trace the scientific name at this stage. Turn the tracing paper over and draw over the skeleton outline only—not the rectangle. With the tracing paper right side up, transfer the skeleton outline to the background fabric with a stylus, lining up the traced rectangle with the stitched rectangle (it helps to have a board underneath the frame of fabric to provide a firm surface).

Note: Take care to use the minimum amount of lead when tracing. If your outlines are too dark, gently press the traced outlines with pieces of masking tape or Magic Tape to remove any excess graphite.

Method: Milk Parsley

Milk Parsley, *one of the preferred host plants for the Swallowtail Butterfly, has hollow ridged stems and deeply indented leaves. As Milk Parsley is an umbelliferous plant, the bud and flower stalks all join in an umbrella-like fashion at the end of the stems.*

Requirements

Mill Hill seed beads 0479 *(white)*
Mill Hill seed beads 3021 *(ivory)*

very dark green stranded thread:
Soie d'Alger 2126 or DMC 3345

dark green stranded thread:
Soie d'Alger 2125 or DMC 3346

medium green stranded thread:
Soie d'Alger 2124 or DMC 3347

light green stranded thread:
Soie d'Alger 2123 or DMC 3348

very pale green stranded thread:
Soie d'Alger 241 or DMC 772

cream stranded thread:
Soie d'Alger Crème or DMC 3865

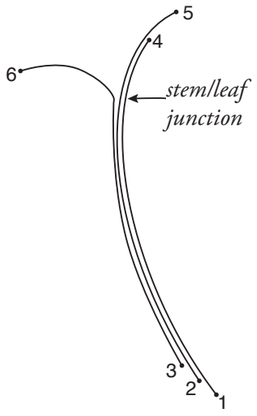
white stranded thread:
Soie d'Alger Blanc or DMC Blanc

medium green soft cotton padding thread:
DMC Soft Cotton 2470

Stems

The stems are worked in raised stem stitch, in shades of green, over a padding of soft cotton thread (one to three strands, depending on the thickness of the stem).

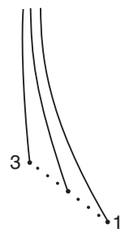
1. See diagram on next page. The lower section of the stem is padded with three lengths of soft cotton thread. With a 30 cm (12 in) length of soft cotton thread in a chenille needle, insert the needle at 1 (from the front) and bring out at 2. Adjust these tails of padding thread to be of equal length. Bring a 15 cm (6 in) length of soft cotton through from the back at 3, holding the tail of thread out of the way with masking tape (it will be trimmed later). Using one



strand of dark green thread in a size 10 crewel needle, couch the three lengths of soft cotton thread along the lower stem line, working the couching stitches 3–4 mm apart. To produce a tapering stem, make the couching stitches 3 mm wide at the base, reducing to 2 mm halfway up the lower stem then tapering to 1 mm width just before the stem/leaf junction is reached. Make sure the couching stitches are just snug (not too tight), as nine rows of raised stem stitch will be worked over them.

2. Continue couching the two right side lengths of soft cotton thread along the right leaf stem, sinking one of the tails at 4 and the other at 5 (hold the tails out of the way with masking tape). Reduce the width of the couching stitches as the thickness of the padding reduces.

3. Couch the remaining length of soft cotton thread along the left leaf stem line, sinking the tail at 6.



stem stitch guide

4. With one strand of thread in a tapestry needle, work nine rows of raised stem stitch to cover the lower stems. The rows of stem stitch are worked in alternating shades of green to produce a striped effect, typical of the hollow stems of milk parsley. Start all rows, in a staggered fashion, along a line between 1 and 3 (i.e. row one starts at 1, row nine starts at 3), and finish each row at the point as listed.

- Starting at 1 with dark green thread, work a row of raised stem stitch to 5.
- The next seven rows start at staggered points (like satin stitch) between 1 and 3.
- With very dark green thread, work a row of raised stem stitch to 5.
- With medium green thread, work a row of raised stem stitch to 5.
- With very dark green thread, work a row of raised stem stitch to 5.
- With medium green thread, work a row of raised stem stitch (the centre row), finishing at the junction of the leaf stems.
- With very dark green thread, work a row of raised stem stitch to 6.
- With medium green thread, work a row of raised stem stitch to 6.

- With very dark green thread, work a row of raised stem stitch to 6.
- Starting at 3 with dark green thread, work a row of raised stem stitch to 6.

To neaten the lower edge of the stem, work a long chain stitch from 1 to 3, with one strand of very dark green thread. Work a straight stitch inside the chain stitch if required. Trim all tails of soft cotton thread.

chain stitch placement

5. Refer to skeleton outline on page 207. Pad the left bud stem with one length of soft cotton, couched in place with one strand of medium green thread. Sink one tail of padding thread at the junction of the lower leaf stems and the other at 7. Work four rows of raised stem stitch to cover the left stem, starting the rows at the lower leaf junction and finishing at 7. Work the rows alternately in medium green and light green thread.

6. Pad the right flower stem with one length of soft cotton thread, couched in place with one strand of medium green thread. Sink one tail of padding thread at the junction of the lower leaf stems and the other at 8. Work four rows of raised stem stitch to cover the right stem, starting the rows at the lower leaf junction and finishing at 8. Work the rows alternately in medium green and light green thread.

7. Pad the upper leaf stem with one length of soft cotton thread, couched in place with one strand of medium green thread. Sink one tail of padding thread at the junction with the flower stem and the other at 9. Work four rows of raised stem stitch to cover the leaf stem, starting the rows at the junction with the flower stem (blending into the stem) and finishing at 9. Starting at the right side edge, work the rows in very dark green, medium green, very dark green and dark green.

Leaves

The leaves are worked in padded satin stitch with one strand of thread in a size 10 crewel needle.

1. With medium green thread, work the veins in split stitch, connecting the centre vein to the row of medium green in the fleshy leaf stem.

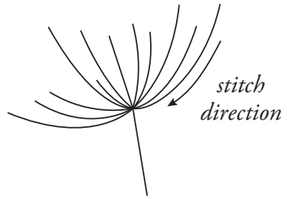
completed milk parsley leaf

2. Using dark green thread, outline the leaf in stem stitch then work padding stitches over the leaf surface. Embroider the leaf in satin stitch (enclosing the outline), working the stitches from the outside towards the vein (angle the needle under the vein). Start at the tip of each leaf margin and work one side at a time.

3. To make a smooth connection between the leaf and the stem, work a stitch from the lower edge of the leaf into the edge of the leaf stem.

Milk Parsley Buds

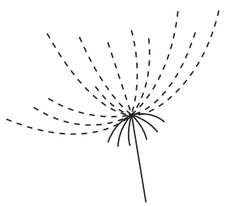
The bud stalks all join at the end of the stem. The bud stalks are worked in outline stitch (not stem stitch) as it produces a finer line.



bud stalks

1. With one strand of medium green thread, work the bud stalks in outline stitch, working from the end of each stalk towards the bud stem.

2. The buds are worked in satin stitch, 2–3 mm away from the top of the stalk, some with medium green thread and some with light green. Using one strand of either medium or light green thread in a crewel needle, work a bud with 9–10 satin stitches, all worked through the same two holes, 2–2.5 mm apart. With the same thread, work a straight stitch from the base of the bud to the top of the stalk. Embroider approximately five buds per stalk, less if the stalks are behind others. Work the front stalks first, then the back stalks.



bud sepals

3. Work sepals at the base of the stalks in outline stitch with medium green thread.

Milk Parsley Flowers

The flower stalks are worked in outline stitch (not stem stitch) as it produces a finer line.

1. With one strand of light green thread, work the flower stalks in outline stitch, working from the end of each stalk towards the flower stem.

2. Work the flower heads with a mixture of French knots (white, cream and very pale green) and beads (white and ivory):

Work the French knots with 6 strands of thread (one wrap), in a size 1 milliners needle.

Apply the beads with a double strand of matching thread in a size 10 crewel needle. Take one stitch through the bead, then another stitch 'around' the bead (through the same two holes but not through the bead—allowing the stitch to 'split' around the bead); this keeps the bead stable.

Start with a French knot at the end of a stalk, then work knots and apply beads to fill a rounded shape around the first knot. Take care not to make the blossoms too even or symmetrical. It is easier to have all threads and beads going at the same time.

completed milk parsley buds

completed milk parsley flower

Method: Swallowtail Butterfly

This embroidered panel *features the stages of the life cycle of the Swallowtail Butterfly—ovum (egg), larva (caterpillar), chrysalis (pupa) and imago (butterfly).*

Requirements

quilter's muslin: *20 cm (8 in) square*
gold kid: 5 cm (2 in) square *(colour kid green if desired: Copic G99 Olive)*
yellow felt: *5 x 8 cm (2 x 3 in)*

paper-backed fusible web: *5 x 8 cm (2 x 3 in)*
3 mm bronze/purple bead *(Hot Spotz SBXL-449)*

Mill Hill seed beads 0128 *(yellow)*
Mill Hill seed beads 0367 *(garnet)*
Mill Hill petite beads 40374 *(bronze/purple)*

33 gauge white covered wire:
four 15 cm (6 in) lengths
(colour sections of wire dark grey if desired: Copic W7 Warm Grey)

swallowtail butterfly, larva, & pupa

Thread Requirements

lime green stranded thread: *DMC 907*
black stranded thread: *DMC 310*
medium orange stranded thread: *DMC 946*
dark orange stranded thread: *DMC 900*
pale grey stranded thread: *DMC 762*
black stranded thread:
Cifonda Art Silk Black or DMC 310
dark grey stranded thread:
Cifonda Art Silk 215 or DMC 317
light yellow stranded thread:
Cifonda Art Silk 1114 or DMC 744
medium yellow stranded thread:
Cifonda Art Silk 1116 or DMC 743
blue stranded thread:
Cifonda Art Silk 989B or DMC 796
red stranded thread:
Cifonda Art Silk 254A or DMC 817
medium brown stranded thread:
Soie d'Alger 4534 or DMC 610
dark grey stranded thread:
Soie d'Alger 3446 or DMC 3799
ecru stranded thread: *DMC Ecru*
slate/gold metallic thread:
Madeira Metallic No. 40 col. 484
dark grey metallic thread:
Madeira Metallic No. 40 col. 360
gold/black metallic thread:
Kreinik Cord 205c
iridescent white metallic thread:
Couching thread 371 col. White Opal
gold sewing thread:
Gutermann Polyester col. 488 sewing thread
variegated brown/grey chenille thread:
col. Hunter Olive
lime green soft cotton padding thread:
DMC Soft Cotton 2142
grey/green rayon machine thread:
Madeira Rayon No. 40 col. 1062
silk tacking thread
nylon clear thread:
Madeira Monofil 60 col. 1001

Egg (ovum)

The female butterfly lays single yellow eggs on the leaves and stems of Milk Parsley.

With one strand of light yellow thread, stitch yellow beads at leaf or stem indentations for the eggs.

completed eggs