

Willow Coppice Patch



GARDEN, HOMESTEAD, FARM

Willow Coppicing winter-off season crop



SUSTAINABLE, RENEWABLE, USEFUL RESOURCE

Historic Small Farm Willow Patch Harvest



GARDEN, HOMESTEAD, FARM

Grazing Animals in Willow Patch



SUSTAINABLE, RENEWABLE, USEFUL RESOURCE

Planting and Growing Willow



Coppicing what is it? & why do it?

Management of Woody Plants

- Provides materials for fencing, baskets, garden structures, charcoal, living structures, sculpture
- Enhances bio-diversity
- Promotes soil health, erosion control
- Requires no fertilizers and herbicides
- Creates new vigorous regrowth
- Supply of livestock fodder / pollard hay, bee nectar
- Source of bio-mass, phytoremediation, natural sound barrier
- Medicinal value as rooting hormone, aspirin

Site prep and soil conditions

Small scale plantings can thrive on a wide range of soils with neutral pH
Large scale growers require rich clay-silt soil mixtures with abundant water
Flooding and temporary standing water is acceptable with good drainage
Mechanical, chemical and mat options to eliminate weeds and grasses



Site layout and preparation for cuttings

Spacing of plants will yield various results of growth and density

Layout of holes using a jig to burn opening in fabric

Use of a hand dibbler, foot dibbler, or drill to ensure proper insertion of cutting



Planting propagation sticks

Cuttings for planting are from the base of one year old growth
Propagation sticks are 11 inches long with ends cut at an angle
Sticks inserted with buds facing up and about 8 inches in depth
Soak sticks for a day prior to installation
Keep cuttings cool and out of light until ready to plant
Spring planting important for proper root development



Willow seasonal growing cycle-mature plants



Willow seasonal growing cycle 1st year plants



Coppicing & Sorting Willow



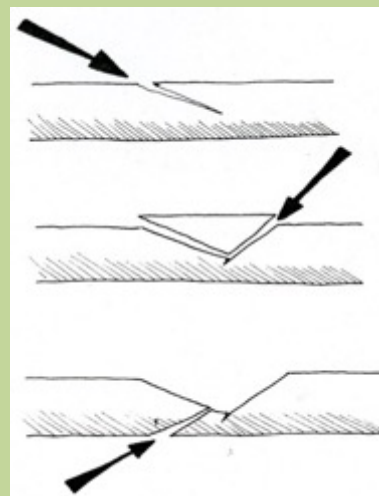
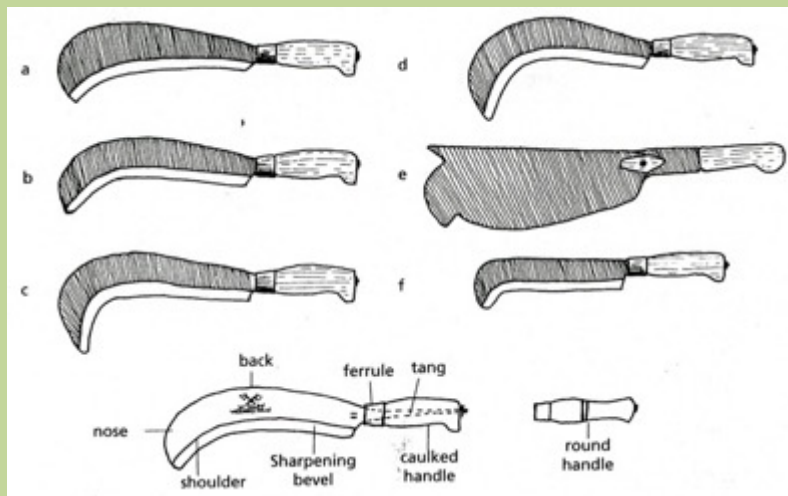
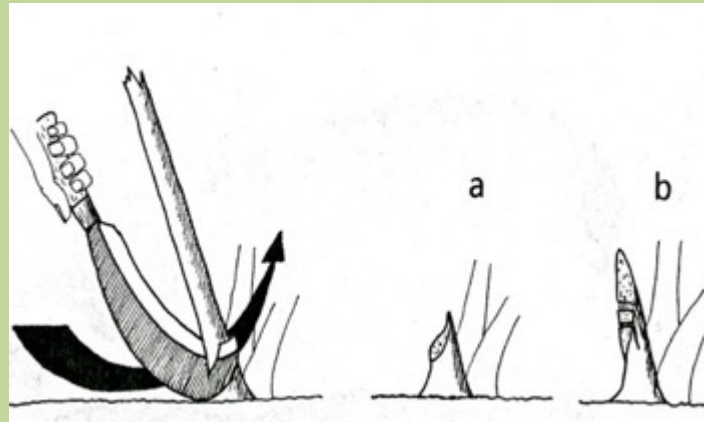
Coppicing willow with billhook

Coppice with various cutting tools such as billhook or pruner
Cut each stem at an angle leaving 2 or 3 buds for next years crop



Coppicing tools & cutting method

Cutting tools include bill hook, side axe, hand pruners, lopers & froes
Cutting based on thickness; 1 stroke $> 1''$; 2 stroke up and down $< 1''$



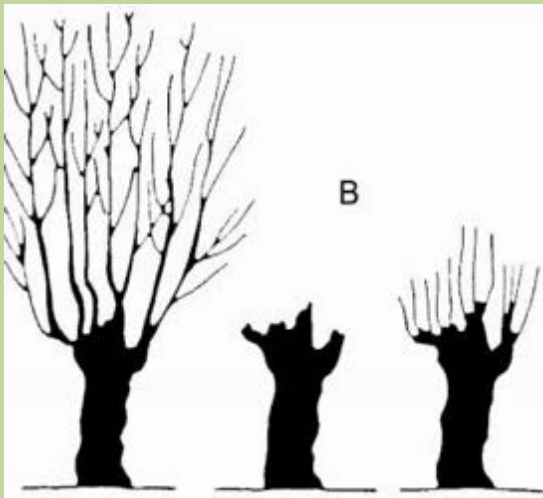
Coppicing willow field

Coppice of willow creates dome shaped stools which regenerate next spring



Coppicing pollard technique

Allow central stem to grow to height where a stool is allowed to develop
Cutting upper branches to promote a dense crown on a large trunk



Sorting, grading & bundling willow

Each specie is sorted to length, bundled in units and stored for drying if used in baskets: or bundled and stored in a cooler to keep dormant for living project



Drying willow sticks

Willow is racked and dried for 2 years prior to weaving. Each specie has a different color and a different tension due to the fiber content of the rod



Dormant willow storage for spring planting

Willow rods used to create living structures and propagation sticks are kept in a dormant state using a walk-in cooler using a cool-bot with ac unit

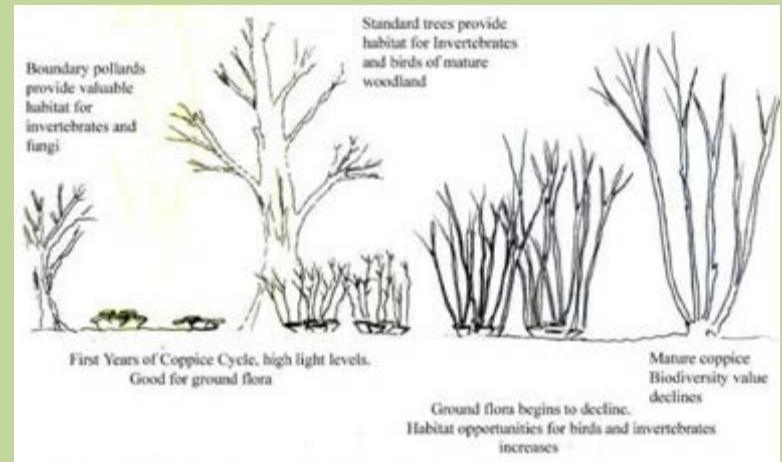
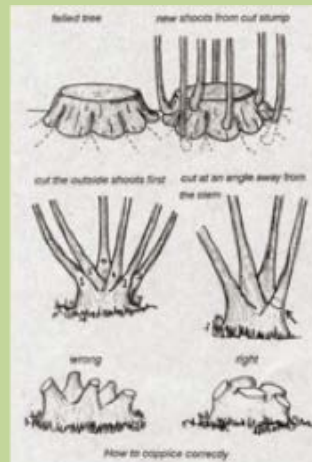
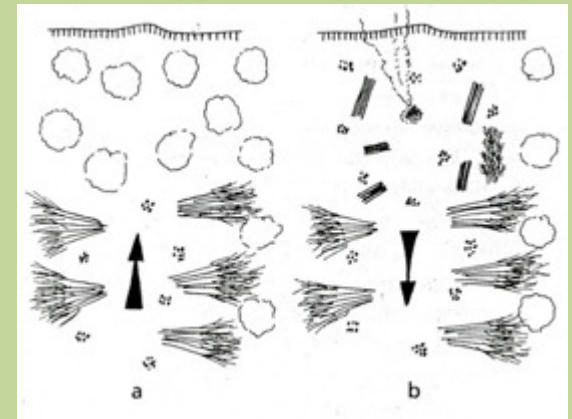


Woodland management

Coppicing & clearing result in natural regeneration of plant & animal habitat

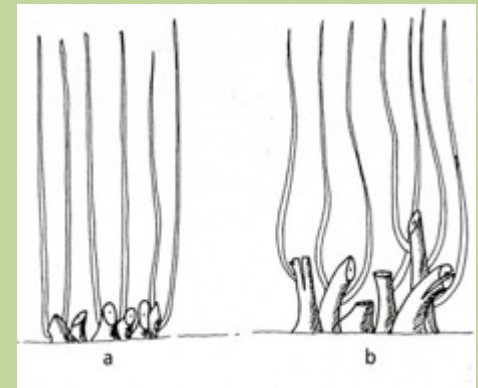
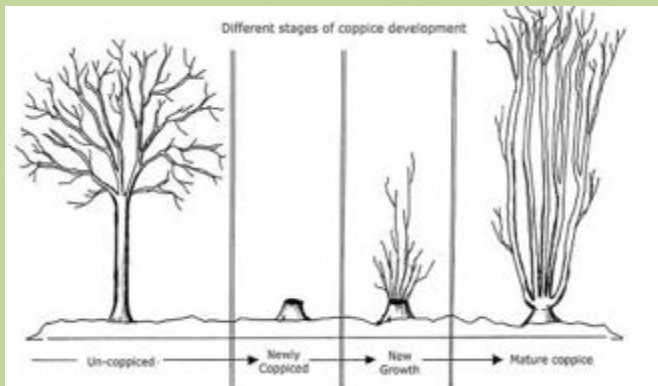
Species: Hazel-Beech-Birch-Elm-Willow-Ash-Chestnut-Sycamore-Maple

Coppice cycle can be one year and/or multi-year depending on specie



Coppicing hazel stool technique

Cutting cleanly at an angle close to base regenerate multiple straight stems
Hazel regenerate in several years & willow rods regenerate in one year



Planting on contour a coppicing wood stand

Contours ripped with sub-soil tool to retain water and create planting space for trees; spacing 10 foot in row and between rows

Compact planting will keep future branches straight and compact

Plant list-chestnut, birch, poplar, sycamore, hazel, black locust



Large scale willow farming, Somerset England

Muskgrove willows farm in England growing, harvesting, boiling, stripping, sorting, bundling willows on a large scale.



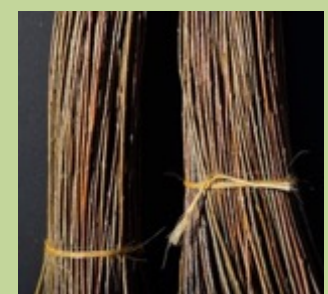
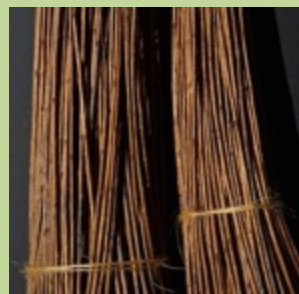
Willow Coppice Patch



What can you make and How will you use it

Beautiful colorful willow

Rod color gain in intensity as xanthophyll pigment is restricted to the stems.

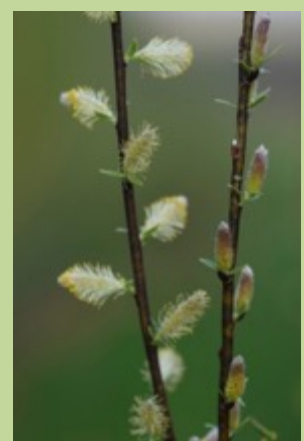
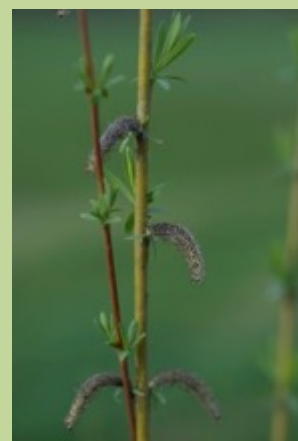
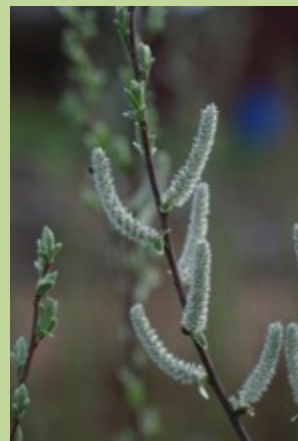
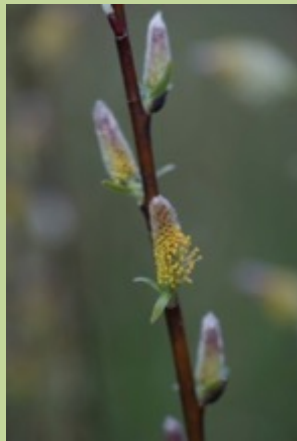


Practical projects farm, homestead & garden

- Craftwork-domestic baskets, farm baskets, traps, walking sticks, furniture, charcoal, feeders
- Fence work-wattle, living fence, gates, hurdles
- Medicine- pain relief, growth hormone
- Energy-biomass fuel
- Living Structures-domes, arches, tunnels, sculptures, deer proof fencing
- Garden Structures-wind breaks, edging, raised beds, trellis, plant supports, fence
- Environmental- stream stabilization, sound barrier, remediation of toxins, effluent absorption
- Food-bee nectar, fodder hay for animals, grazing feed

Food for bees & flying insects-willow catkins

Willow catkins are one of the first sources of nectar for honey bees in the spring
Secretions from petiole in the fall attract sweet nourishment for wasps



Pollard hay for animal fodder and grazing

Willow fields coppiced and grazed by sheep and goats

Pollard hay crop from willow tree coppiced from pollard form



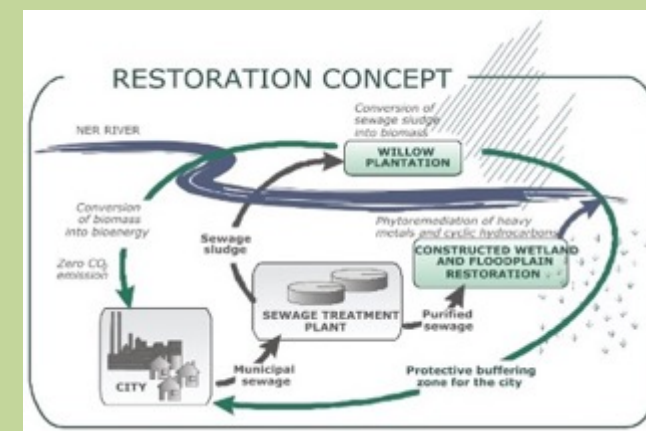
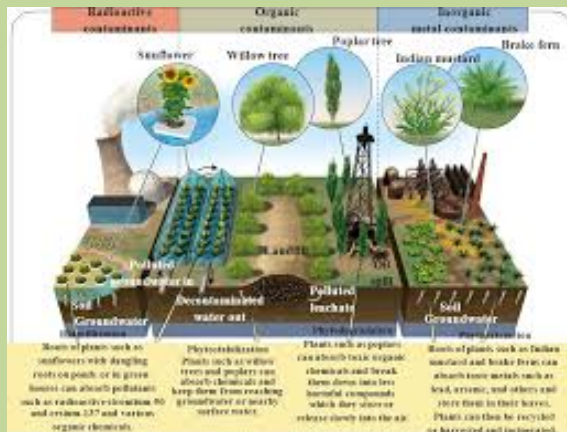
Stream bed erosion control

Willow wattle fence used to stabilize stream banks and reestablish willow plants for long term control of soil erosion



Phytoremediation of soil and groundwater

Phytoremediation is an innovated and cost-effective technology to use plant based systems to remove, degrade or stabilize environmental contaminants present in soil and /or groundwater.



Biomass energy from willow coppice fields

Hybrid species of willow grown for 2 and 3 years to coppice for biomass fuel



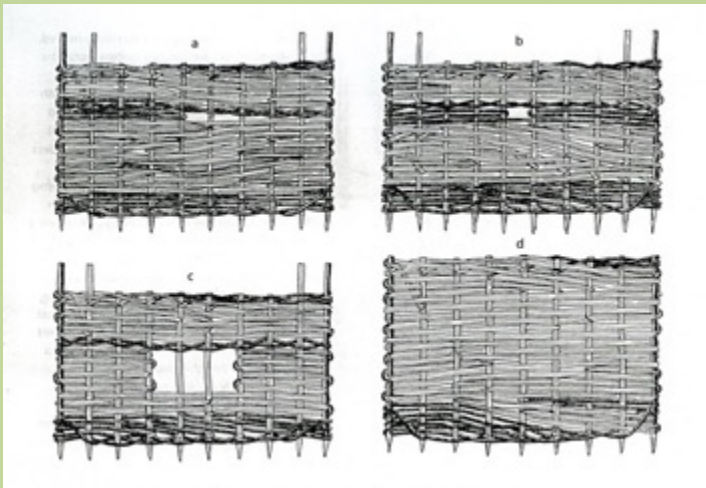
Hormone rooting water using willow

Rooting hormone water made from young growth, bark and tips of willow. Soaking willow for a day in warm water releases the growth hormone.



Wattle fence of wooden stakes & willow rods

Willow rods woven around poles to create fencing, screens and stockyards
Different patterns and sizing for specific types of applications



Wattle fence of wooden stakes & willow rods

Willow rods woven around poles to create fencing, screens and stockyards
Different patterns and sizing for specific types of applications



Willow living fence-wind, sound, sight barrier

Combining willow with recyclable structural materials to grow a sound, wind and site barrier for your property



Willow fence of branch bundle & wood post

Crafting a hedge fence by staking and laying & tying bundles of branches
Fence made with partial coppiced trees layed and woven together with stakes



Willow panels woven with metal

Willow screens, backdrops, walls, privacy woven with willow and thin metal rods along with wooden posts



Woven willow panel method

Technique of weaving panels of fencing for borders, edges, raised beds, etc



Willow woven raised garden beds

Woven panels of willow assembled into raised garden beds, compost bins, etc.



Willow wattle border and edging

Willow rods woven in twining, pairing and wale techniques to create a wattle border. Stakes are spaced to keep weaving tight and even.



Stick supports for growing garden plants

Garden stick structures supporting vegetable growth and aiding in harvesting



Woven garden climbing structure

Garden climbing structures to support vegetables and flowers;
workshop using recycled tire as a weaving jig to make climbing structure



Willow Weaving



Willow grown and harvested on
our heritage farm Appalachia Ohio

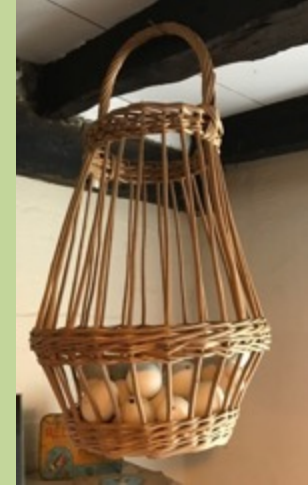
Willow baskets from my studio

Woven from the willow and wood coppiced from my farm



Farm baskets traditional made from willow

Woven willow farm baskets for bee skep, eggs, duck nesting, lobster-fish-eel traps, sheep feeder, herb grower, etc



Fish-market historic baskets made of willow

Woven willow baskets made for carrying, sorting, measuring seafood caught and sold in Cromarty, Scotland in early 1900's



Basket festival parade Vallebraques, France

Celebrating the history and traditional uses of baskets made in Vallebraques



Weaving School, Lichtenfels Germany

Historic School teaching weaving and furniture making in Germany



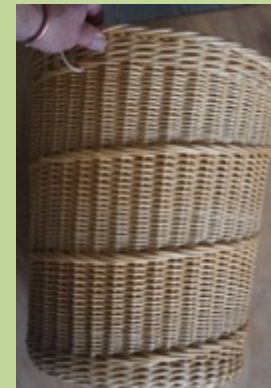
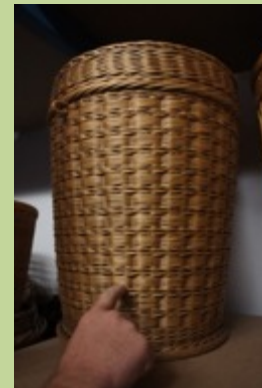
Willow basket weaving

Traditional European willow basket making techniques representing cultures in Germany, Denmark, France, Spain, Italy, England, Ireland



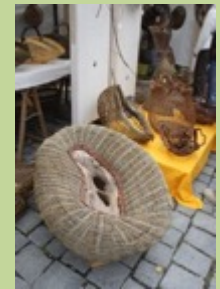
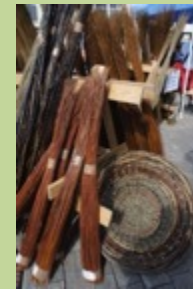
Willow Baskets, Lichtenfels Germany

Wonderful weaving patterns creating texture with willow rods



Korbmarkt Lichtenfel, Germany

Basket festival celebrating history of basket work in Lichtenfel, Germany



Living Willow Structure



Bio-diversity, Living landscapes, Dreams

Living willow fedge-fence/hedge

Soak dormant rods to hydrate prior to planting; dig 6" trench; dibble 6" down to insert rods; 8" spacing with 3 rods diagonal layout of weaving



Living willow arbor-archway

Layout pattern every 6" plant upright with pairs of diagonal upright on each side; rods should always be moving upward to enable growth



Living willow shelter-dome

Showing installation in spring, growth in summer, second year, and third year



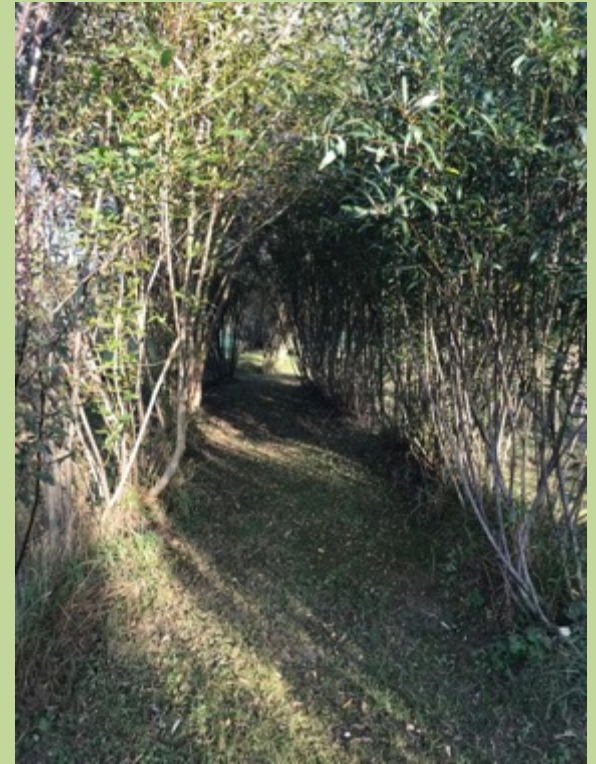
Living willow play structures, shelters, tunnels

Dormant coppiced willow rods are used to make growing play structures



Living willow tunnels and passages

Living willow tunnels established with propagating sticks in 3 years



Garden living willow deer resistant fencing

Garden fence of living willow provides a wind screen and deer protection



Living willow labyrinth and chapel

Multiple pathways, arches and room in complex living willow structure



Braided living willow tree

Willow rods braided, trimmed, and pollard to form pleach structure



Living willow seating & rustic hazel furniture

Coppiced rods of willow and hazel grown for 2 to 4 years crafted into rustic furniture. Living willow rods planted and woven into living furniture



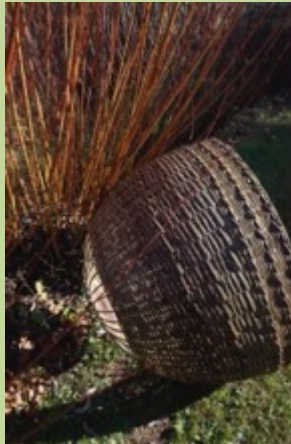
Thumbs Up The Art and Craft of Sticks



Our thumbs make all the difference
in our work and what we make

Light pendant willow dome

Woven lighting dome made on a jig in my studio using a walnut wood pie shape which is the base of the fixture.



Interior-exterior woven architectural elements

Combination of wood, willow, stone, metal create unique architectural designs
Made by Hubert King of Germany



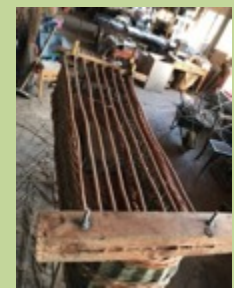
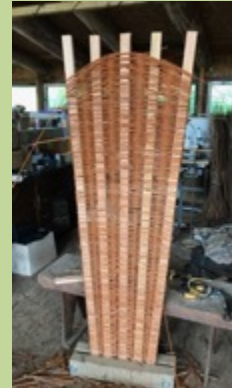
Coracle & Currach woven willow boats

Coppice Willow staked and woven into a boat with a water proof skin



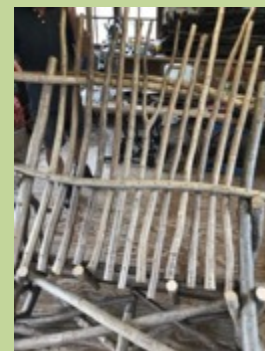
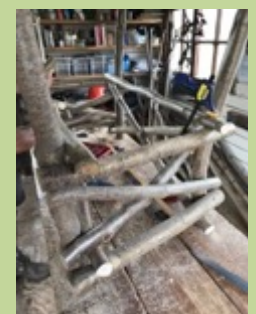
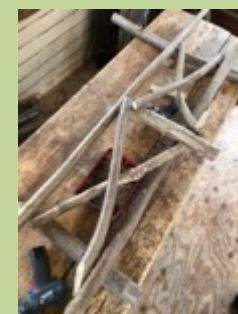
Burial coffin woven with willow in Scotland

Hand woven basket coffin using willow to make the bottom, sides, and top



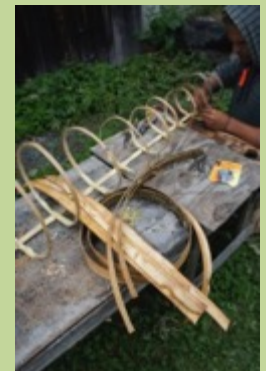
Coppiced hazel rods, rustic furniture, England

Managed Woodland harvested rods made into rustic furniture



Puppet sculpture for Bread & Puppet

Coppice maple saplings and peel green ash bark
Create a large scale performance sculpture for bread and puppet theatre



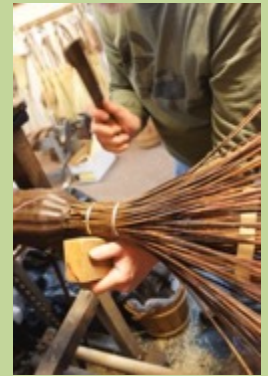
Lantern making with willow sticks and paper

Willow sticks attached together with tape and covered with paper and glue
Lights used to create a lantern which culminates in a light lantern parade



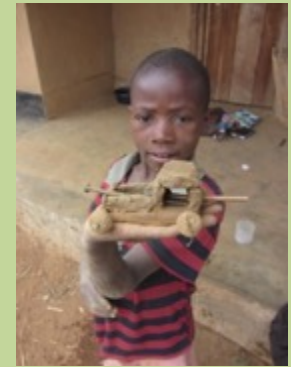
Broom making from Broom Corn & Willow

Broom making using coppiced willow and the tassel heads of broom corn using techniques of winding and hand sewing the materials to a handle.



Creativity with sticks & repurposed materials

Found sticks and recycled materials made into wonderful and simple toys



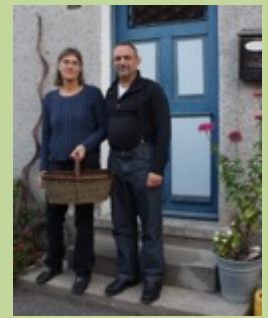
Sculptures made with woven willow

Willow Rods woven into landscape sculptures using stakes and metal frames



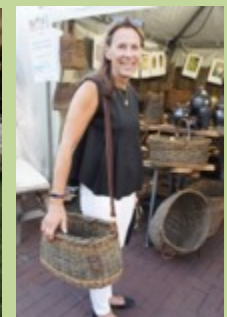
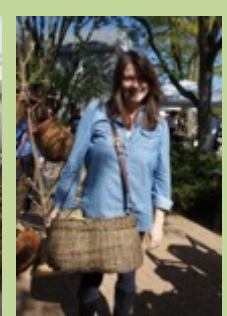
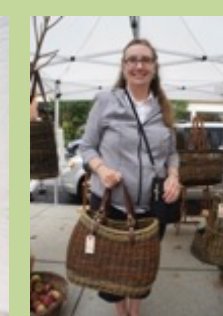
Weavers and Mentors

Wonderful Basket Makers from Germany, France, Italy, Denmark who helped mentor and share their craft with me



Willow Basket Customers

Happy customers with their willow baskets from basket farmer studio



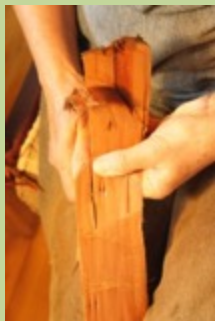
Chestnut sapling harvest, preparing & weave

Harvesting 2-3 year old chestnut saplings in Italian high country
Removing outer bark, splitting rods, then shave with draw knife to prepare
Plait weaving method to make a basket with prepared chestnut material



Harvesting inner bark of black willow

Willow 10 to 15 years in age which are straight and have less branches
Tree bark is harvested early summer as the sap helps to strip off bark
Bark removed from tree, rolled inside out and dried in the sun
Basket plait woven from strips of the inner bark



Thank you



www.basketfarmer.com howard peller