

Tree Crops and a Model of Regenerative Forestry

A Walk in the Woods

John Wages

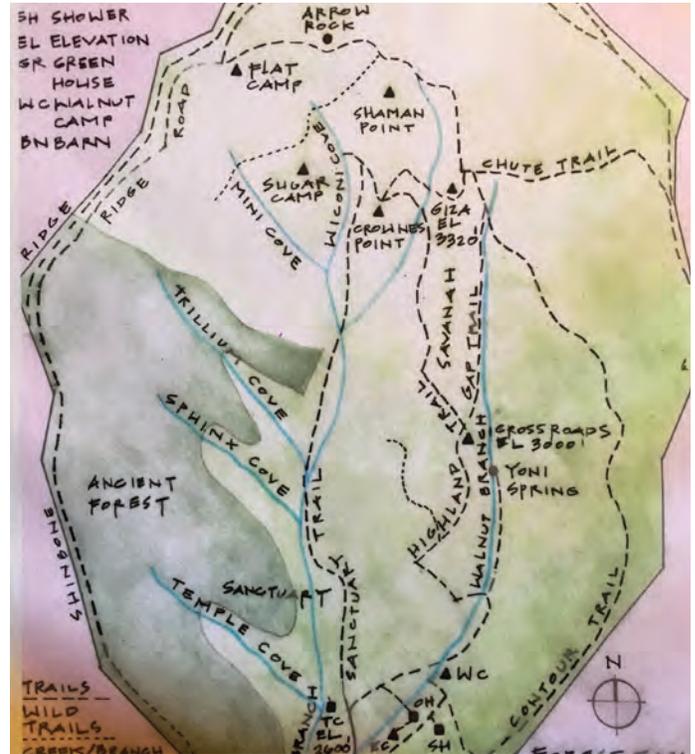
WHEN MOST OF US THINK OF A FOREST FARM, we imagine something that a farmer or a designer planted deliberately. We imagine that someone came to a more or less blank slate and decided, through permaculture design process or some other method, what to plant in various locations on that site. This is indeed the case for most of the food forests that have been described in these pages. In the mountains of western North Carolina, Michelle Dixon and Peter Waskiewicz live on a sprawling homestead, Watershed Forest Farm (www.watershedforestfarm.com). Their farm is essentially a 160-acre food forest, but a very special one. In this case, it was not planted deliberately, or at least not with a detailed outcome in mind. Instead, this is a natural, native food forest. Given that it's in the southern Appalachians, one of the most ecologically diverse regions in eastern North America, you might imagine that it's biologically productive, and you would be right. In late September, we visited Michelle and Peter to learn more about what they're doing on this unique and very special property.

Your farm is called Watershed Forest Farm. How did you come up with that name?

Three years ago, when we envisioned the qualities we were looking for in a homestead, a pure, protected water



Relax with a cup of tea while the chickens entertain you—Chicken TV!



Watershed Forest Farm Visitor's Trail Map

source was the primary directive. At first we thought we were looking for a few acres with a spring, then we were offered an incredible opportunity to steward this classic Appalachian cove* hardwood forest, which was grandfathered within the Cherokee National Forest. The land forms a south facing bowl that rises 1,250' (380 m) in elevation from the lower homestead on up to the encompassing ridge lines. The topography forms a self-contained watershed with a great variety of slopes, solar orientations and resulting microclimates, hence the name. The second name we considered was Plant and Gather Forest Farm, which describes a protocol for "pro-active wild-crafting" that I have been working with over the years. My favorite name was Climax Forest Farm, which, to me at least, illustrated the legacy aspect of our vision for the forest. However, when we tested it out in the community, most folks tended to chuckle, as the successional definition of a climax forest was lost to the reproductive connotations.

Tell us a little about the history of this area—what crops the people grew here and how they lived, and what you know about the history of the farm itself.

The old-timers tell us the Cherokee would spend summer months here, presumably to enjoy the mild summer temperatures. There is a spring near the old cabin that was in use before the first settlers arrived.

In the 1880s, the Capps family settled in this cove and immediately built a hand-hewn American chestnut log cabin. As the story goes, they called it Butter Holler, because the grass and water were so rich that the cows gave butter. They didn't have a truck, a tractor, or even a wagon, just a mule and a sled. Life was tough because of the extreme isolation, but they managed to provide for nearly all their needs. We have heard stories from the family how their ancestors would trade ginseng and bloodroot to the peddler who would travel by wagon, for things they couldn't produce like nails, tools, boots, and cookware. They would grow wheat, corn, and sorghum on steeper slopes than would never be recommended in permaculture. After the 50s, subsistence agriculture mostly ceased, and Butter Holler changed hands several times. One fella planted Christmas trees, another was busted for growing cannabis, which resulted in it changing hands by auction on the Madison County courthouse steps for a song. We purchased it from a glass artist who was the leader of the Butter Holler String Band. Herbal medicine has deep roots in Appalachia. We know that most pharmaceuticals used to come

It is fantastic to see communities reinvigorating local economies with businesses rooted in the botanical richness of the mountains.

from plants. Well, many of those raw materials were harvested in hollers** just like this one. Botanical businesses were a big part of the local economy. Nearby towns like Erwin, TN, and Boone, NC, were trade hubs for raw plant materials that were shipped to apothecaries around the world. We're seeing a reawakening of the rich herbal tradition that used to be here. To celebrate it, the Sassafras Moon Herb Festival was launched this year in Erwin (herbalachia.com). It is fantastic to see communities reinvigorating local economies with businesses rooted in the botanical richness of the mountains.

Is that a chestnut tree I see outside your kitchen window (or is the forest just glad to see us)?

When the Capps family first arrived, the American chestnut (*Castanea dentata*) was still the primary canopy species. Permies know that it provided exceptional timber and an

abundant source of protein and carbohydrates for people and wildlife. The chestnut blight was first noted 1904 in New York and quickly spread through Eastern forests, killing nearly every tree by the 1930s. Before the blight hit here, all but the steepest slopes had already been cleared to graze and grow crops. As Southern Appalachian forests regenerated, the oaks and tulip poplars replaced the chestnut as the climax species. Around 1950, the Civilian Conservation Corps took on the first efforts to reintroduce the American chestnut by planting blight-resistant Chinese chestnuts (*Castanea mollissima*) in this and other hardwood coves. My assumption is they had hopes that they would naturalize and cross-pollinate, passing their resistance to any of the remaining American chestnuts that were resprouting from the old stumps. The Chinese chestnuts they planted have since naturalized along the creek with a healthy succession of 70-year-old plantings, teenagers, and saplings behind them. We have a nursery of modern, improved Chinese chestnuts that we are planting into the groves to invigorate the gene pool. We still have American chestnuts sprouting from the old stumps and independent American chestnut seedlings growing in the highlands. I am still hopeful that blight-resistant American chestnuts may be regenerating here and in other hidden coves. The CCC also planted selections of black walnut (*Juglans nigra*) in this hollow, and we now have a large succession of productive black walnuts growing on the west face.

What are some of the more unique products of Watershed Forest Farm?

In terms of botanicals, we're experimenting with spicebush, (*Lindera benzoin*), a hardy native shrub also known as Carolina allspice. The tea you're drinking is a combination of spicebush twigs, leaves, and berries. We're working towards value-added products that combine spicebush with complementary botanicals. Other income streams we are developing include a plant nursery, mushroom cultivation, wildcrafted herbs, honey bees, specialty crops like ginger and



View of the upper garden from the deck of the cabin.

turmeric, workshops, and a variety of agritourism offerings. All of these come together in our CSA program, which we call Community Supported *Forest* Agriculture.



Air potatoes produce small edible bulbils along their growing stems. This abundant crop is growing in a bush alongside the trail to the upper garden and cabin.

Tell us a little bit about how your CSFA differs from a typical CSA?

From the beginning, it was clear that the finance and labor required to fulfill the long-range vision for the watershed was well beyond the capacity of one couple, and the concept grew from there. The CSFA model we are developing addresses our short-term economic needs, while supporting regenerative forestry goals that merge agriculture with preservation.

Our mission and permaculture design process led us to combine aspects of traditional CSAs and forest farming with elements gleaned from Community Forestry (CF). CF is an innovative branch of forestry that is broadly defined as “any situation that intimately involves local people in forest activities.” On a regional scale, CF projects combine forest conservation with rural development, poverty reduction, and community empowerment.

Alongside traditional vegetables, our biweekly deliveries include wild harvested herbs, mushrooms, value-added medicinal products, and even firewood. Then there is the agritourism aspect. CSFA members can come for a farm-to-table meal, to wild-craft some nettles, take a workshop, they can host their own small event, campout or simply un-plug with an afternoon of free-range nature bathing. A big difference between a typical CSA and our CSFA is that unused credits don’t expire at the end of the season. This gives our members an opportunity to purchase two or more years in advance as a way to support and invest in the prolonged task of establishing a perennial agriculture.

How is the CSFA developing, and how has it been received in the community?

This was the first year we sold multiple shares, and now that the season is coming to an end, I can safely say our members were thrilled. Overall, people are very excited about the concepts. Because members were promised a certain amount of foods that they’re accustomed to eating, we used that as motivation to get some good-sized gardens established. The drive to keep members happy serves to move it all along.

What about animals. I’m sure you have plenty of wildlife here.

Yes, there’s a lot of wildlife in the woods around us. We have bear, bobcats, coyotes, and according to everyone but the state of North Carolina, there are mountain lions here. I saw one off Paint Fork Road some years back. My first thought was, that was a big dog crossing the road. A split second later, I knew that sleek moving creature was no dog—it was a lion! But yeah, there are wild turkey and a fair amount of deer, but probably not as many as you’d imagine, in places like Kansas or Arkansas. I suppose the topography is tougher for the deer here, and maybe the lack of monocrop grains and cleared pastures keeps them in check. We have two great guard dogs who generally keep all the deer and predators away from the homestead. Sometimes, they chase them all night long, but the deer have never hit our gardens.

Your farm is mainly on a steep slope in Western North Carolina. It must be difficult to grow traditional crops, yet you have a CSA. How do you cope with the slope?

With a 1250’ elevation change, the topography is a major defining feature that impacts nearly every aspect of design. The lower portion of the land has about 10 acres (4.1 ha) of



*Shiitake logs stacked streamside. As we walked down to the stream, we noticed American groundnut (*Apios americana*) growing near the bridge.*

moderately sloped, full sun pastures that we have reclaimed over the past two years from the tangle of invasives, briars, hardwood saplings, and fallen Christmas trees that we inherited. After nearly three years of observation and planning, I look forward to 2020 when we plan to have a good sized excavator here to move large stone for terraces, dig swales and ponds, fix logging roads, and all sorts of powerful projects that will help to level the playing field, at least a bit. For now, we are incorporating a higher percentage of annuals as we transition these pastures towards a production plan that increasingly favors perennials. Growing vegetables drives us to build soil, terraces, and trellises down in the sun where we live. Over time, these mixed gardens and orchards will expand into the moderate sun areas to meld with the surrounding forest edge. As we progress, the marketing plan will move further away from the traditional CSA model towards one that incorporates more u-pick and wildcrafting member shares, along with agritourism.

That all sounds exciting. Have you made any projections of how much income you can develop from this site?

Before we even moved onto the property, we were working with spreadsheets to estimate how many people

These mixed gardens and orchards will expand into the moderate sun areas to meld with the surrounding forest edges.

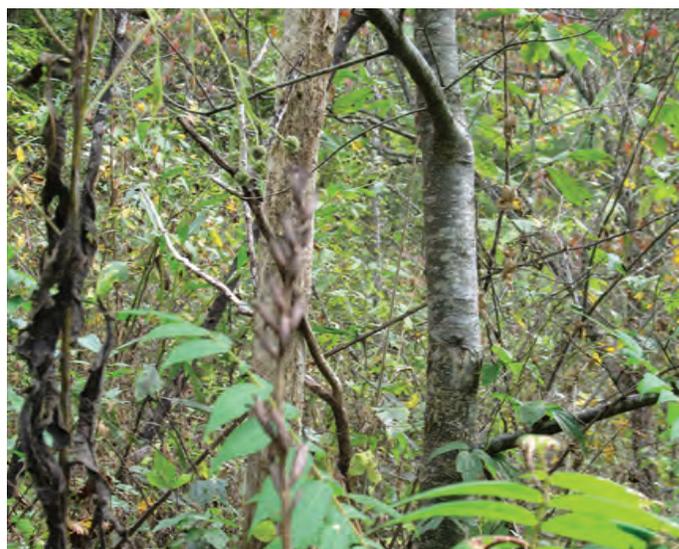
per day we wanted to have on the site. What is the limit for people? What's the limit for parking, etc.? The current limit is no more than 28 people on the land at any given time. I mean, so if we wanted to have a wedding and say we have five helpers on the land and maybe another family, that's ten already. In that case, we wouldn't host a wedding with more than 18 people. As far as projecting potential income from this site, the forest yields, annual garden yields, agritourism, I've done some of that. We are confident that we can have all the dollars we need, for as long as they are necessary. We work with two inspiring groups in Asheville that are pioneering the cooperative nuttury movement. Acornucopia (www.acornucopiaproject.com) and Nutty Buddies (nuttybuddycollective.com) have purchased and constructed commercial-scale nut shellers and oil presses to process their added-value products. They also make the equipment available to the community for a percentage of the harvest. We plan on getting a walnut cracker and oil press



Peter showing us red, ripe spiceberries.

for our farm and our neighbors, plus we are in the process of designing a large dehydrator for herbs, mushrooms, and small batches of timber.

When it comes to the forest, "The yield of the system is limited only by the creativity of the designer." At the onset we hired Certified Forester Richard Sanders (wildwoodconsultingllc.com) to help us develop a long-range management plan that would guide us in our newfound stewardship. The plan divides the land into six tree stands, depending on their species make up, age, and microclimate. We developed separate management plans for each of the six stands, which includes: low-grade thinning, removal of invasive species, habitat restoration for wildlife, and low-impact sustainable timber harvests for use in onsite structures and a woodworking shop. We plan to share what we learn



American chestnut sprouting from a stump trailside.

with other private forest stewards to help provide alternatives to clear-cutting.

A few issues back in the magazine, we had some people write about Hershey's nursery in Pennsylvania. They went searching for the site of the old nursery. The nursery was long gone, of course, but amazingly, some of Hershey's trees were still there. They collected seeds and materials to try to bring some of it back—improved honey locust, mulberries, persimmons, walnuts, and so forth. But, after Hershey died, nobody kept his nursery going. Much of Hershey's research and long-term breeding knowledge was lost, and that was one of my questions. What have you done to ensure that Watershed Forest Farm will continue after you're gone?

That's a good question. Well, we're looking at land trusts. There's a local group, and I probably wouldn't mention them by name because we're not settled on doing it yet. But they would put agricultural easements on the property, so that it has a kind of blanket preservation to ensure that it's not going to become a real estate development. At some point, the permaculture design along with our forestry management plan would become fused to the land via the easement. The design and forestry plan would carry forward with the land, even if it changes hands.

As long as we are managing the forest with integrity, where we don't cut trees or make changes to the forest without basing those changes on a series of conscious decisions, we are doing the foundation work to set this forest into a harmonious pattern that will replicate itself. If we do a good job, why would anyone ever mess with it? If the roads and the access are perfect, and the plantings are really doing well together, and if the soil is gorgeous in the middle full sun spots, and our water and energy systems are set up, there would be no reason to change it. That's how I feel, but I realize the need for sound planning. The thing that's cool about land conservancy is they will help find a caretaker. If something changes, they'll hold onto the land until they find the right people to manage it within the bounds of the easement and offer them a sweet lease or purchase deal.

Another strategy we've considered is to bring in another family or two here to help carry out the long-range plan.

You founded Sow True Seed in Asheville. What can you tell us about your experience starting a seed company?

Yeah, Sow True was my baby. I named it, put the seed list together, marketed, and ran it for the first four years. I'm very proud to have launched it, but I'm not involved anymore. Before I moved to the Asheville area, I had experience in the organic seed industry. I remember telling the folks at Earthaven, that if nobody picks it up in a few years, I'll do a great seed company here, because every great regional agriculture system needs one. When we opened up the doors in 2008, it spread like wildflowers that were being watered by a perfect storm. It was like the maturation of the local food movement, collided with the rise in gardening during the sub-prime collapse, while Non-GMO was fast becoming

a household term. One of the most memorable aspects of that period was when we enrolling the company as plaintiffs in the Organic Family Farmers *et al.* vs. Monsanto case. In the case, 70 farmers and seed growers petitioned the court to end Monsanto's practice of suing organic farmers for patent infringement after GMO pollen drift contaminated organic seed crops. Thanks to Obama, the Monsanto President, they successfully defended their bogus claim in the U.S. Supreme Court, that pollen drift from GMO to organic crops does not amount to contamination. However, towards the end of the case, they did announce that they would no longer pursue these types of lawsuits, and to my knowledge they haven't filed one since.

What is your vision for the future of Watershed Forest Farm?

Well, our day-to-day vision is rooted in the future, and you're in luck, I have a freshly shined up vision/mission statement that I will read from the website.

Watershed Forest Farm is a family homestead, botanical sanctuary, and regenerative forestry preserve in the mountains of Western North Carolina. Guided by a commitment to water protection and the ethics of permaculture design, Peter and Michelle are stewarding this magnificent cove forest towards a legacy of ever increasing vitality, resilience, and abundance. Through demonstration, practical research, and education programs, the farm works to provide a model for active preservation that inspires sustainable forestry in Southern Appalachia and temperate climates around the world.

This grand vision begins with Zone 0: the homestead and the lifestyle we are creating. We started with the

I have to have at least two reasons to cut a tree.

best day ever and worked from there to create a plan that allows us to repeat it over and over. That would be a lot less complicated if it didn't have to include conjuring all of the energy needed to pay for the land as well as regenerate the forest. Our best days include time in the gardens and forest to cultivate and wild-craft and time in the kitchen to process and experiment. So, we are developing income streams that allow us to concentrate on the diversity of the forest and not get caught up producing just a few products. The perfect example is the "Forest to Table" dinners we host. Rather than spending our time harvesting large amounts of a few species to sell wholesale, we can get the greatest effect with the least effort by serving that produce on plates at a much higher margin. The Forest to Table also fulfills a primary economic goal of our permaculture design, which is money coming from on-farm sales (including internet) rather than



View of the Blue Ridge Mountains from the table where Farm to Table dinners are currently held in the historic 1880s cabin.

driving to traditional markets. A recurring planning question is how to incorporate the whole of the forest into our daily lives, while meeting our financial obligations and honoring our preservation goals. One answer is to share it with others. Ultimately, what we are sharing is a legacy in the form of a food and medicine forest, that endures for centuries. Within that we have some very groovy projects that deserve support like: a wood-fired forest spa with spring-fed tubs, sweat lodge style sauna, cold plunge, and a radiant heated bathhouse with space for yoga, massage, and a Jap-Palachian teahouse! That's the plan for what I call the permaculture country club. To find out how you can support this and other projects go to the Watershed Preservation Society page on our website, or support our campaign on Patreon. <https://www.patreon.com/watershedforestfarm>

We are members of the United Plant Savers Botanical Sanctuary Network (unitedplantsavers.org). United Plant Savers was started by Rosemary Gladstar and others to provide education on ethical wildcrafting and cultivation methods to take pressure off of wild medicinal herb populations. They publish an annual list of at-risk plants and were instrumental in promoting the expansion of ginseng and echinacea cultivation. The network is comprised of around 70 locations in North and Central America. Beyond plant habitat, the sanctuaries provide educational events, as well as native plants and seed for preservation efforts. We are proud to be one of the newest members of the network. We all know what regenerative forestry is—the 'preserve' part refers to the plan to protect the watershed in perpetuity. Δ

Peter Waskiewicz is a lifelong student, teacher, and advocate of organic farming and sustainable culture. He moved to western North Carolina after ten years in the company of world-class seedsmen

and permaculture designers in New Mexico and the Garden Isle of Kauai. In 2001, he co-founded the pioneering green building firm Southeast Ecological Design. Beginning in 2008, he conceived and established Asheville's organic-heirloom seed company, Sow True Seed. Uniting his powers of botanical inspiration with the embodiment of the divine feminine, Peter merged with Michelle in 2017 to birth their life's greatest work, Watershed Forest Farm (www.watershedforestfarm.com).

For the last two decades, Michelle Dixon has worked with young children, staying home with her young son and creating the five-star family child care home Nanny Nanny Poo Poo, Inc. During her time working with young children, Michelle became passionate about child-directed free play, local food, clean water, and being outside. At Nanny Nanny Poo Poo, children were often barefoot, working with mud, deep in concentration. The outdoor learning environment grew blueberries, grapes, mints, and herbs. A community garden was started next door where the children visited daily. Several times a week, Michelle could be seen leading a crew of five preschoolers through the woods, across the street, to the Botanical Gardens. The family-style meals were organic and often local, thanks to their CSA produce box. Spring water was always on tap and accessible. Nanny Nanny Poo Poo was a model family child care home, receiving many accolades. Michelle was awarded Preschool Teacher of the Year in 2006. Now retired from preschool teaching, Michelle is excited to create a new outdoor learning environment for all ages.

Permaculture Design thanks Bruce Johnston for introducing us to Peter and Michelle. Watch the pages of this magazine for future developments and more on Watershed Forest Farm.

* A cove is a valley between two ridge lines, which is closed at one or both ends, in the Appalachian Mountains. Coves typically have abundant edges and multiple microclimates.

** 'Holler' is a term used in the South for a hollow, which refers to a smallish valley.



Michelle Dixon and Peter Waskiewicz

Continued from page 6.

Rainwater is harvested on-site with two locally made corrugated iron tanks which together hold 32,000 L (8,000 gal.). We use this for our internal household water supply, pond, and garden bath to which we add liquid manures and compost teas for hand watering. The majority of the garden is irrigated by hose using mains water. We also collect run-off water from the laneway adjoining our property, which flows down a channel on a slight decline to a large infiltration basin in the front yard. This overflows into a smaller basin in the nature strip (land directly in front of our property, which is open to public use) that surrounds the tile-lined raised bed.

We have a netted orchard / straw yard with nine chooks that help turn our unwanted biomass into rich compost. In winter, I dig up the yard and put the material into compost bins around the garden, where they are left for a few months to break down further with the addition of ash and humanure. When I'm ready to plant, I spread the compost over the surrounding area.

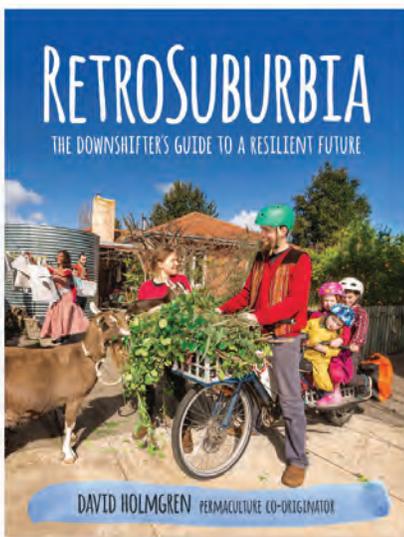
I consider Abdallah House an example of an 'extreme retrofit,' which has repurposed on-site materials to maximize beneficial outcomes. Aspects of the project are included in David Holmgren's *RetroSuburbia: A Downshifter's Guide to a*

Resilient Future and as one of several case studies featured on *RetroSuburbia.com* (retrosuburbia.com/case-studies/abdallah-house-case-study/).

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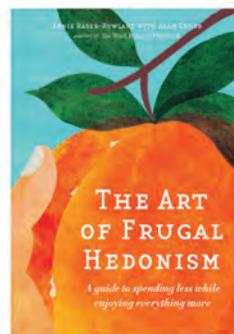
Richard Telford completed his PDC in 2000 and received his Diploma of Permaculture in 2010). Beginning in 1998, Richard spent seven years living in two permaculture-designed intentional communities. In 2001, he collaborated with David Holmgren on the design of the Permaculture Design Principles icons and has since produced many of his other titles, using skills he developed as a graphic artist. In 2008, he launched permacultureprinciples.com and produced the Permaculture Calendar with David Arnold to illustrate the design principles and convey the foundations of permaculture to a wider audience. He now co-directs a permaculture book distribution enterprise of Melliodora and other titles. He bought a small run down home in Seymour, Victoria, Australia, rebuilding it with his family to be Abdallah House: an urban demonstration of low-impact living. Since 2010, the home has become a local attraction and a small-scale 'permaculture playground' where ideas can be put into practice. This article first appeared in Pip Magazine Issue #7 and is reprinted here, with some changes, by permission of the author.

SUPPORTING INNOVATORS WITH TOOLS FOR CHANGE

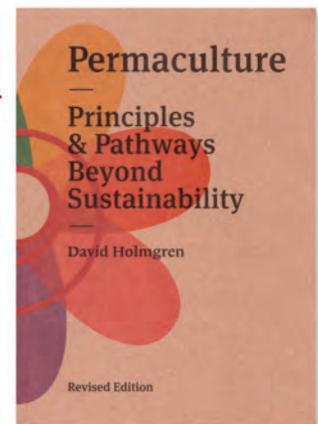


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