

# ROLLING HOMES

*Shelter on Wheels*



*Lloyd Kahn*

*Author of Shelter and Tiny Homes*



# Contents Vans



Searching for Waves ...	2
1988 Mitsubishi Delica: SlackerVan ...	8
A Van Called Perry ...	12
Toyota Sienna Van ...	16
A Van Named Spock ...	18
Mountains, Valleys, Islands, and the Sea ...	26
Converted Ford Transit Van ...	30
We Built a Life ...	34
Crystal's AdVANturous Life ...	36
Two Sprinter Vans ...	38
Katie's Van Life ...	40

## All-Terrain Vehicles & Cars



Custom Jeep Camper ...	42
Foster's 1994 Toyota Land Cruiser ...	48
1992 Land Rover Defender ...	52
Adventure Jeep ...	56
Crossing the Sahara Desert with Two Cylinders in 1972 ...	60
Second Generation Citroën ...	68
Living in a Tiny Car ...	70
Mother Trucker ...	74
El Burro – Overland Pack Mule ...	76

## Solar-Powered Vehicles

SunRay's Solar Electric Diesel Hybrid Vardo ...	80
Solar-Powered Electric Vans ...	82



## Pickups with Campers

Just Camp! ...	86	Lotus Pod ...	116
Homemade Pop-Top Camper ...	90	Stealth Camper Shell ...	118
Overland Under Budget ...	92	The Beehive ...	122
4x4 Cabin ...	96	Aerodynamic Camper ...	124
Surfer's \$500 Camper Shell ...	100	Pickup Truck Sauna ...	128
The Vardo Camper ...	102	Flutter By Pizza Pie ...	130
The \$300 Camper Shell ...	106	Jay Nelson ...	132
Lightweight Camper Shell ...	112	Freedom on Wheels ...	136
The Birdhouse ...	114	The Redwood Road Boat ...	140
		Alaskan Custom Truck Cabin ...	142
		Tacoma TRD Cedar Camper ...	148
		4WD Toyota Tacoma Camper ...	152
		Two Camper Shells ...	154
		Mikey's Snowchaser #2 ...	156





## House Trucks

- The Lorry Life ... 162
- Le Benne-Benz ... 168
- Canadian House Truck ... 174
- Mr Watts ... 180
- House Truck Built of Salvaged Materials ... 182
- Building Bluebell ... 184
- A Rolling Home for Twelve Baby Bison ... 188



## House Buses

- A Bus for All Seasons ... 192
- A Cabin on Wheels ... 198
- Towanda ... 200
- Old Red ... 204



## Trailers

- Airstream Conversion ... 206
- Fran's Bambi ... 210
- Lightweight Trailer ... 212
- Maisonnettes à Roulettes ... 214
- Wandering Star II ... 218
- The Wonder Wagon ... 222
- Philippa's Folding Cabin ... 226
- Caraban: The Trailblazer ... 228
- Moksha's Lightweight Trailers ... 232

- Tiny Home in France ... 234
- Vardo in Connecticut ... 236
- Modern Vardo ... 238
- Bulgarian Vardo ... 256



## Cycles

- Surfers' Transcontinental Road Trip in Tuk-Tuk ... 240
- The Winnebiko ... 246
- Conestoga Bicycle Camper ... 250
- Nomad Shepherd ... 252
- The Robo Hoboes ... 254





# Introduction

**T**HERE'S A NOMADIC REVOLUTION going on these days. In the last few years, either for reasons of practicality (high costs of rent or mortgages), change in lifestyle, or the search for adventure, people are customizing all sorts of vehicles for travel.

The last decade has been an era of innovation, improved design, and, due to social media, communication of nomadic experimentation.

Mercedes Sprinter vans (along with Ford Transit vans and other high-top vehicles) have prompted a wave of rolling homes.

Advances in stoves, refrigerators, solar power, pop-tops, rooftop tents, and adaptation of many nautical devices have expanded the options for outfitting rolling homes.

This book focuses on do-it-yourself vehicles, with most of them fitted out for the road by their owners — similar to the way that Shelter's books on building feature handbuilt homes.

Of the 75 homes covered here, 29 are full-time residences. (Eleven of the vehicles are from builders who have been featured in previous Shelter books.)

You can read the stories here as if you are traveling along — riding shotgun — with the contributors: sharing their experiences. And if you're considering building a nomadic home, you'll find practical information and a wide variety of solutions honed by experience.

Included here are vans, sedans, trucks, buses, and trailers, with an extensive array of designs and styles. A number of the units are 4-wheel drive for off-road travel.

If you thumb through these pages and look at the sections on "Vital Statistics," you'll find a wealth of components to choose from if you're building a home on wheels.

There are dozens of floor plans, all sorts of sleeping arrangements, and some unique "stealth vehicles" — designed to be under the radar, so that passers-by have no idea that someone is sleeping in a parked vehicle.

There is a European mini-van designed and outfitted by a young German woman who just graduated from architectural school and took a sabbatical to go surfing. There are a number of camper truck shells, all completely different. A converted school bus that is used in both cold weather for skiing, and in warm climates (such as Baja California) for surfing.

There's a converted horse trailer furnished with Victorian antiques, which is used at Burning Man. A tiny Geo Metro (3-cylinder sedan) that is ingeniously designed for sleeping, cooking, and eating in the stealth mode. Two solar-powered electric vehicles that charge their batteries with onboard solar panels. Two travelers who criss-crossed the U.S.A. for 6,500 miles on electric-powered unicycles.





# Toyota Sienna Van

## Travis Skinner

*This is a simple, practical consideration for anyone contemplating a van. Web research indicates that Sienna vans often go for 200,000–300,000 miles, and get combined city/highway mileage of over 20 miles per gallon. I've been considering getting a used one (for one thing, in case we have to evacuate due to fire danger), and reportedly 2010, 2015, and 2017 models get high ratings for durability.*

*Travis' home, called The Leafspring, in which everything, including steel and copper parts, is handcrafted, was featured in Small Homes (pp. 52–53). On his website ([www.100handed.org](http://www.100handed.org)) other examples of his work can be seen, including an amazing sculptural sauna covered with copper shingles, and most recently, a unique book on the project titled Anglerfish Sauna: Material Based Design & Deep Sea Sculpture.* –LK



**O**H LITTLE TOYOTA VAN,  
your fill is never through.  
So many mountains of materials,  
so many country roads that you flew.  
This vessel holds humble wonder,  
without drawing attention to her door.  
A modern-day magic carpet,  
with a three-inch foam mattress floor.  
There is a simple freedom;  
mobility allows us to view  
When the setting sun rests in the sea,  
and when we pour the morning brew.  
This cocoon is our container,  
an extension of our handmade nest,  
A grocery getter, camouflaged chameleon,  
bringing hope to our next quest.

Build by Travis Skinner  
[instagram.com/pairoducks](https://www.instagram.com/pairoducks)  
[www.100handed.org](http://www.100handed.org)

Photos by Macky Swoboda  
[instagram.com/mackyswob](https://www.instagram.com/mackyswob)

“A modern day magic carpet...”







*“There is a simple freedom; / mobility allows us to view /  
When the setting sun rests in the sea.”*





# A Van Named Spock

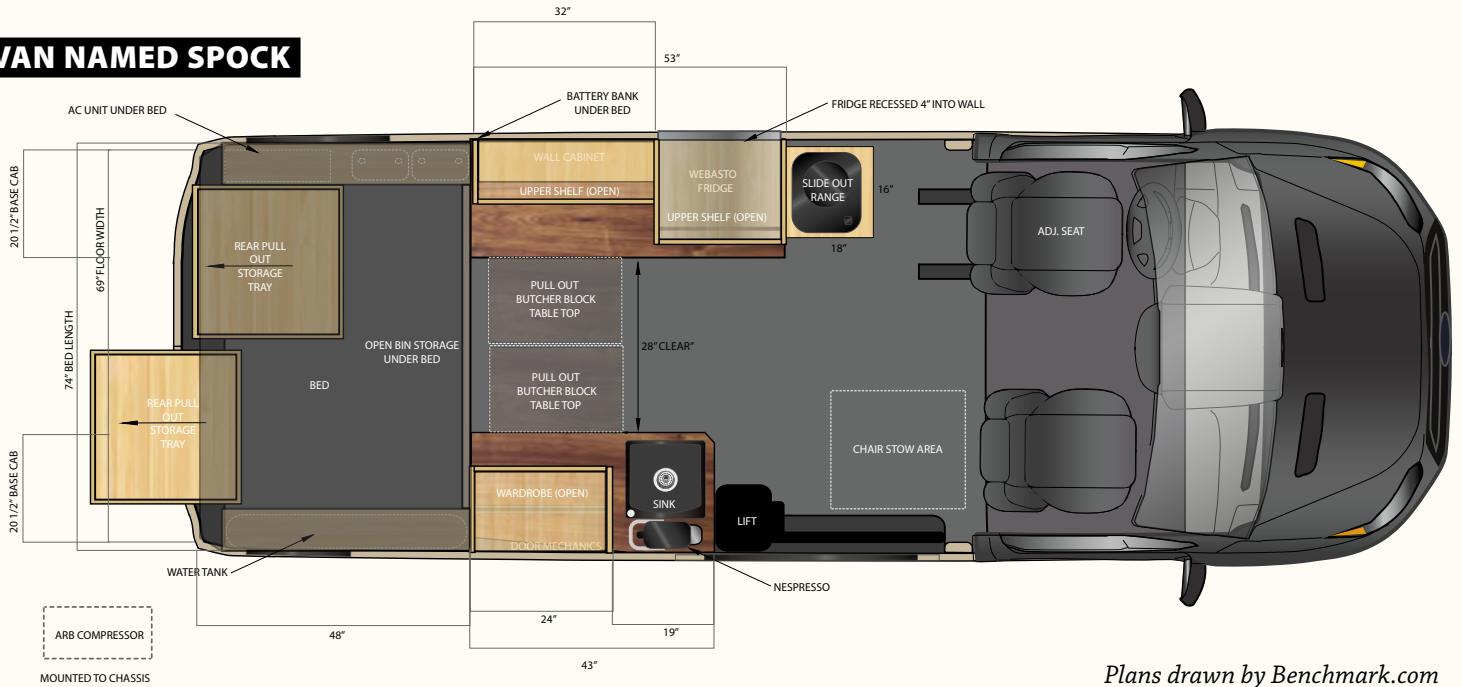
Kirk Williams



*"My van, Spock, evolved through a 10-year R&D using other vehicles."*



## A VAN NAMED SPOCK



Plans drawn by Benchmark.com

*"Not being able to use your legs is one thing, but not having any dexterity in your hands or fingers is a whole other level!"*



*"Drawers bring items within reach without my having core strength."*



# Mountains, Valleys, Islands, and the Sea

## Ana de la Montaña & Christoph Wallner



*“Ana asked, ‘Are you really sure we can build something like this?’”*

*(Ana is Spanish; Christoph is Austrian.)*

**A**LL THE GOOD STORIES THAT WE were listening to, watching, and reading started off with a van. So we bought one. That’s literally how it started.

Having not really worked much with our hands before (we only trained our fingertips in office jobs), we started working on our van not only to get on the road but to learn some new skills as well.

I remember sitting in a restaurant with Ana right after we bought our Opel Movano (owned by a roofer before). We were watching a conversion video on YouTube, and Ana asked, “Are you really sure we can build something like this?”

From that day on, we were motivated, and we spent all our spare time building this mobile home that we now call Movi. Knowing that we should prepare for all seasons, we insulated and soundproofed the interior. (Austria, our homeland, can be pretty cold in winter.) We installed a

heater, built the furniture, got a big solar panel, and installed a water system.

Then, in November 2019, we took off and escaped from the rhythm of everyday life. We climbed with friends in Sardinia, ski-toured the Pyrenees mountains, surfed the Atlantic coasts of France, Spain, and Portugal, climbed and skied on the highest mountains of Morocco, and explored all seven Canary Islands.

One of our main goals was to be more active in our favorite sports (skiing, surfing, running, and climbing), but we realized that we also needed to relearn how to calm down and not follow schedules. In addition, we needed to take days off from traveling to reflect on our adventures.

Now, when we think about our two years on the road, we remember the countless campfires in the Moroccan desert and sharing endless waves with the crazy surf rats we met in northern Spain.

We shiver recalling the snow-covered mountains of Andorra where we ski-toured out of our camper and returned to a warm and cozy home after long days in the snow.

We won’t forget those crazy landscapes on the Canary Islands and the animals we rescued, adopted, and sheltered. (Yes, that happens regularly if your companion is a veterinarian — in Sardinia, we even needed to rescue a goat that had fallen into a steep well, believe it or not!)

Not even the COVID-19 pandemic, which of course changed all our plans, stopped us. In the middle of a medieval and incredible landscape outside Cáceres (Spain), we found shelter in a country home where we slowed down for four months.

We don’t really know where we will be when this book gets released, but if we could have one wish, it would be “on the road.” And if nothing crazy happens before then, that’s where we’ll be.





*In the mountains of Picos de Europa*



*“Then, in November 2019, we took off  
and escaped from the rhythm of everyday life.”*



**More...**



# Katie's Van Life

## Katie Larsen

I'M A 27-YEAR-OLD NOMAD WHO HAS SERIOUS addictions to hot sauce, puzzling, and salt and vinegar chips. I've been living full-time on the road in various vans since 2017, documenting my travels online as *So We Bought A Van*.

I decided I wanted to pursue travel full-time and experience real freedom in my life. I began in a Mercedes Sprinter and now reside in a Ford Transit. Both van builds were DIY, with the Sprinter taking six months to complete and the Transit taking nine months.

Over the last five years, I traveled all over North America, including driving all the way to Alaska, all around Canada, all 49 lower states, and even spent some time in Baja California, Mexico.

My passion for the outdoors has grown immensely over the years, making stationary life feel just about impossible.

Some of my travels have included a partner, but most of my experiences on the road have been solo. These days, I have a five-year-old rescue dog named Indi as my co-pilot.

I began freelancing in 2017 and have loved working remotely since then. My days are balanced between work and play, mixed with a fair amount of self-care.

Many days are spent exploring trails in the mountains, visiting national and state parks, or finding epic swimming holes. If there's a body of water nearby, I'm probably swimming in it.

Life on the road means having the freedom to do what feels best to me, without any obligations or limitations. Being mobile allows me to pursue happiness and experience the world in such a deep capacity, spending almost every day in nature. It's amazing what living outside can do for the soul.



[instagram.com/soweboughtavan](https://www.instagram.com/soweboughtavan)

[facebook.com/soweboughtavan](https://www.facebook.com/soweboughtavan)

[www.soweboughtavan.com](http://www.soweboughtavan.com)

[www.soweboughtavan.com/van-life-shop](http://www.soweboughtavan.com/van-life-shop)

[youtube.com/channel/UCQBM\\_Lq4XVpGzd2x8YGPT-Q](https://www.youtube.com/channel/UCQBM_Lq4XVpGzd2x8YGPT-Q)



*"I decided I wanted to pursue travel full-time and experience real freedom in my life."*





### VITAL STATISTICS

- **Vehicle:** 2016 Ford Transit, 148" wheelbase, 38,000 mi. This is my second DIY build, but the third van I've lived in. (Most of the photos here are of my previous vehicle, a Sprinter van.) I've always preferred a high-roof van and a stationary bed. Having a decent-size fridge helps in staying off-grid longer. So does having a good electrical system. My new van has a dining room table/workstation, which has been a gamechanger since I freelance remotely full-time. It also has a heater — a luxury but makes living in a van full-time easier during winter. So does having a composting toilet!
- **Ceiling fan:** Maxxair/Airxcel Deluxe 7500 K (smoke)
- **Stove/oven:** Dometic CU-434 propane 3-burner stainless steel stove/oven
- **Fridge:** Dometic CRX 110S
- **Solar kit:** Renogy 300W, 12V off-grid Premium Eclipse solar panel and DCC50S 12V 50A DC-DC onboard battery charger with MPPT
- **Batteries:** Two VMAXTANKS LFPGC2-12175 LiFePO4 Lithium-iron 12V 175Ah deep-cycle batteries
- **Inverter:** Renogy 2000W 12V pure sine wave inverter
- **Insulation:** Mix of spray foam, Thinsulate, and XPS foam board
- **Heater:** Espar/Eberspacher Airtronic B4L (petrol)
- **Table:** Lagun table-mount system
- **Toilet:** Air Head composting toilet & straight fan shroud
- **Tires:** BF Goodrich K02 all-terrain tires
- **Outdoor shower:** Portable handheld camping shower with 5 gal. water — 12V cigarette adapter
- **Water system:** Four Reliance Products Aqua-Tainer (7 gal. each)

*"My passion for the outdoors has grown immensely over the years, making stationary life feel just about impossible."*



*"I freelance remotely full-time."*



*"It's amazing what living outside can do for the soul."*









**S** EVEN YEARS AGO, I WAS WORKING 50+ hour weeks as a mechanic at the local Jeep dealership in my hometown. You could find me either smoking unfiltered cigarettes or turning wrenches with grease up to my elbows. This life was wearing out my body, and even more so, my mind.

That was the year I found rock climbing, and it was the year I bought the Jeep. Back then it had a leaky fold-down canvas top, and I was naïve about what living a life on the road would be like.

I packed up to travel in that tent-on-wheels for what was supposed to be only a few months of driving cross country to go rock climbing and to experience all the places I'd seen only in books.

Before I left, I sold my mechanic's tools — a way to solidify my decision to leave the trade. I didn't want to come back from that trip and continue being the same person. That money allowed me to travel the country, but in reality, it allowed me to start a new life.

It's been quite a few years since that first road trip. Since then, both of us have changed quite a bit. I slowly built the soft top from the inside out, installing an over-the-wheel-well kitchen counter and built-in dashboard cabinets. Then one cold winter, I replaced the top itself with the cedar shake micro-house you see here.

It's built almost entirely of scrap and salvaged materials I found. The metal roof is from an old farmhouse; the flashing is made of chimney pipes and is framed with offcuts from a barn build's scrap pile. The only things purchased were some tubes of adhesive to keep the shingles fixed and some fresh roofing screws with gaskets to keep the metal down and leakproof.

Every season starts with a power wash to get the cedar clean, and a week or so of fixes and upgrades to make the space as comfortable as can be. This little adventure mobile is constantly evolving, as I do with it. It's been amazing to look through old pictures for this Shelter Publications project and to see how far we have come. To think, it all started with that first road trip.



#### VITAL STATISTICS

- **Vehicle:** 2002 Jeep Wrangler TJ 4.0L
- **Transmission:** 5-speed manual
- **Mileage:** 195,000 mi.
- **Insulation:** 2" rigid foam board & spray foam
- **Heater:** Webasto Air Top 2000 gasoline heater
- **Electricity:** Goal Zero Yeti 400 battery-powered portable power station
- **Bed:** Salvaged styrofoam, scrap yoga mats & army surplus blanket
- **Stove:** MSR Pocket Rocket

*What info can you pass along to people building or outfitting a vehicle?*

Very rarely does life align to make converting a vehicle a "convenient" thing to do. The process is almost always bumpy, and pursuing a project like this takes energy, time, and sacrifices. It will almost certainly be uncomfortable or scary. But learning to breathe through the process and taking breaks when needed can make the journey much easier.

Don't be limited by what you think a conversion "should be." Follow your creative vision. But also be realistic about your ability and don't build something that will fall off on the highway or get rattled loose on washboard roads.

Make sure to build something that can withstand hurricane-force winds and an earthquake. Triangles are strong; squares, not so much.

*What would you do differently if you had it to do over again?*

Start with a bigger vehicle. A 20-square-foot vehicle with a bed only one inch longer than you is a tight living space. I have spent well over 1,000 nights inside here and if things were, say, 20% bigger, I probably wouldn't have this persistent kink in my shoulder.



[instagram.com/smellybagofdirt](https://www.instagram.com/smellybagofdirt)  
[instagram.com/squallythetrolley](https://www.instagram.com/squallythetrolley)  
[www.staywildnevermild.com](http://www.staywildnevermild.com)

*"It's built almost entirely of scrap and salvaged materials I found."*





# Solar-Powered Electric Vans

## Brett and Kira Belan

Photos (unless otherwise noted) by Kira Belan

**S**OLARROLLA, A COMPANY CONVERTING vehicles to fully electric, solar-powered living spaces, is run by Brett and Kira Belan.

In 2006, Brett and Kira met and began living off-grid in Northern California. Brett has a bachelor's degree in mechanical engineering and has been building cars since he was a teenager. He worked for Ford, then Jaguar in England, and later began setting up off-grid systems with solar, hydro, and wind power.

Brett and Kira loved the sustainability of creating their own power and decided they needed a vehicle that matched their ideals.

In 2008, they built a solar-powered golf cart. It performed so well that they began planning a full-size vehicle. Meanwhile, however, they converted a 1973 Harbilt English postal van, two more golf carts, and two Indian rickshaws. All of these were fully electric and solar-powered.

In 2012, they moved to Ashland, Oregon, and in 2015 began building their

solar-powered 1973 VW bus, in which they have traveled with their family along the west coast.

In July, 2018, they formed Solarrolla Inc., and began building solar electric vehicles for others.

In 2018, they outfitted a 2011 Navistar eStar van with solar power and a larger battery pack for an Australian client, Joel Hayes. Joel formed Route Del Sol with a dream to drive a solar-powered vehicle on the Pan Am Highway all the way from Alaska to Argentina. (He has made it all the way to Baja at this point, purely on sun power.)

In 2019, they outfitted a 1971 VW bus for the singer/songwriter Redfoo; they consider this their most exceptional vehicle.

In that same year, they built a solar electric three-wheeled cargo bike and a mobile solar charging station on a trailer that can be used to charge an electric vehicle, as home backup for power outages, or other off-grid situations.



*Brett, Brook, Lyric, and Kira with their solar-powered 1973 VW bus*

Recently, Brett and Kira moved from Oregon to a 12-acre piece of land in northern Wisconsin, which has a large shop with a car lift. They are currently working on two eStar vans; one for a client and one to use as a promotional and demonstration vehicle. They both will get up to 300 miles on a charge and will charge up to 100 miles a day from the sun. Also in process is another VW bus build and a 5 kW Solar pull-behind trailer to charge a Rivian Truck.



### VITAL STATISTICS

#### 1973 VW Bus Transporter

- 100-mile range
- Lithium ion battery pack
- 1200 watts of solar (4300W glass-framed panels)
- Up to 30 miles a day from the sun
- 6-hour charge time with Level 2 charging station
- High Performance Electric Vehicle Systems (HPEV) 500A, 144V AC electric motor
- Upper tent space for sleeping
- Ovente glass-top, electric, single-burner stove
- 23L Dometic AC/DC top-opening refrigerator
- Sink with 6-gallon storage tanks





*“Solar-powered vehicles are a lifestyle change.”*



### VITAL STATISTICS

#### Redfoo 1971 VW Bus Transporter

- 100-mile range
- **Lithium Battery pack:** 7, Tesla Model S 5.3 kWh modules for a total of 37.5 kWh
- Almost 3,000 watts of solar (twelve 145W flexible, aluminum-framed panels)
- Up to 100 miles a day from the sun
- 4-hour charge time with Level 2 charging station, 2–3 with Tesla Destination charger
- NetGain Hyper9HV, 500A, 144V AC Electric Motor
- Upper tent space for sleeping and convertible couch/bed to sleep a total of 4
- Ovente glass-top, electric, single-burner stove
- 23L Dometic AC/DC top-opening refrigerator
- Sink with 6-gallon storage tanks

*“You will be slowing down. You won’t need any gas. You won’t have to pay rent.”*





# Homemade Pop-Top Camper

## James Vadas

**F**OR SEVERAL YEARS, I MADE DO WITH THE small camper shell and cramped bed of my 2005 Toyota Tacoma while truck camping around the Rocky Mountains of Colorado. When my girlfriend, Alex, began joining me for my weekend adventures, I knew I needed to find a way to make the truck camping experience more comfortable and accommodating.

I found inspiration from a book about canoe building that described using epoxy to build waterproof and strong wooden canoes. I wondered if I could use the same process to build a wooden truck topper that would be lightweight, waterproof, and durable.

I created a rough design and began to assemble the tools and materials I would need for the wood and epoxy topper. I purchased  $\frac{1}{8}$ " plywood and light 2x4s from a local Home Depot, a three-gallon marine epoxy kit from Boat Builder Central and got to work. Over the course of three weeks, the topper took shape as I built the frame and sheathed it in thin plywood.

A feature I added to my topper was to extend the back end of the topper over the tailgate to allow easier access and provide more shelter at the back end of the truck. The topper was light and delicate, but as I applied several coats of marine epoxy, the topper hardened and stiffened.

I scavenged the windows and hardware from a damaged, old truck camper shell I bought on Craigslist. I sewed lightweight tent fabric to fit the pop-up opening and was given an old mattress foam pad to use as a bed in the topper's sleeping loft. Total cost for materials: about \$1,200, mostly from Lowe's and Home Depot.

After four weeks, the topper was ready for the road. The benefits of the extra room and raised sleeping platform were immediately apparent. We no longer needed to shuffle our gear and belongings around when climbing into the bed to sleep at night. Now when we pull up to a trailhead or ski lot late at night, it's with the knowledge that we'll get the good night's sleep we want.

*"... inspiration from canoe building, which uses epoxy to build waterproof, strong wooden canoes"*



*"Total cost for materials: about \$1,200, mostly from Lowe's and Home Depot."*



*Rabbit Ears Pass, Colorado. It snowed 8" that night and got down to 5 degrees Fahrenheit. We use a Mr. Buddy heater to warm the camper up at night before going to sleep and in the morning when waking up. It stays about 25 degrees warmer than outside. With the heater on low, it gets very toasty inside.*





# Surfer's \$500 Camper Shell

**Gabriel Abrego**

**Photos by Nick Radford**

**I**'VE RECENTLY HIT THE STAGE IN LIFE where responsibilities are at an all-time high. Getting married, raising kids, running a business, doing house chores, paying bills — the list goes on.

I love to surf, but my windows for surfing have become few and far between. These windows are precious, so I need to be very selective, always paying attention so that when the surf is up, I'm ready to go.

I decided that what I needed was a camper shell on my existing 2013 Toyota Tacoma work truck — to house all my surf gear, camping supplies, and provide a place to sleep (whether that's in a campground, dirt road, or parking lot).

I needed the build to be low-budget. It also would have to be a part-time side project as it couldn't interfere with any of my work in our full-time furniture shop.

I nickel-and-dimed my time on the camper shell for about a year. I used as many shop remnant materials as I could, and anything I bought was easily available from the local hardware store.

I spent around \$500 in total, \$200 of which was a failed attempt at using epoxy and fiberglass over the hollow "basket weave" roof. The main structure is made of 2×3 Douglas fir, with an upper level that cantilevers over the cab of the truck — creating an 8'×3½' sleeping platform. The platform has a trap door on hinges, which allows access from underneath and can be closed to create the sleeping space.

There are two holes in the platform, which allow surf racks to be strapped down so longer surfboards can be secured while driving. The "basket weave" roof is scrap Baltic ply strips interwoven and skinned with a ballistic nylon that is sealed with a two-part urethane — essentially the same application as a modern skin-on-frame canoe.

Insulated grocery bags were used as insulation and the interior of the



*"I love to surf, but my windows for surfing have become few and far between."*







*“It has a full-size bed and comfortable seating for more than two.”*

**B**UILT ON A '98 V6 TOYOTA TACOMA, THE camper is framed with Douglas fir 2×2s and 2×4s and insulated with 1½" rigid foam. It's sheathed with ¼" and ⅝" plywood with a redwood bender-board ceiling on top of custom Douglas fir glue-laminated arches and then sided with ⅝" clear cedar T&G.

It is meticulously glued, screwed, caulked, sanded, oiled, and varnished. The roof is a temporary pond liner but it will eventually be copper.

It has a total of eight hidden tie-down points, four of which are turnbuckles that go through the truck bed to the frame, and the other four are ratchet straps to the bed's tie-down points. It has four detachable Rieco-Titan hydraulic legs that operate manually or with a drill.

The interior is paneled with cedar bender-boards and built out with lightweight cedar-framed cabinets and shelving. It has a full-size bed and comfortable seating for more than two.

It has a full kitchen with a three-burner propane stove/oven with a hood vent, running water, 12V fridge/freezer, and a Dickinson marine propane heater. It holds 21 gallons of water and 11 pounds of propane.

Powered by a 12-volt lithium ion 170Ah Renogy battery with two 170-watt, flexible Renogy solar panels. The camper battery



is also wired to the truck's alternator so that it charges while driven. There are multiple 12-volt outlets and a 1000-watt inverter for 120-volt power inside when traveling, and a shore power hookup outside that's used to charge the battery when stationary as well as to supply 120-volt power inside.

It weighs 1,700 pounds dry (maximum payload of a stock Tacoma) and was designed so I could eventually transplant it onto a slightly larger truck with a custom flatbed for extra storage as well as water and propane.

With the help of many good friends, this camper was built a few feet from my bed in the middle of my house (which is a garage that I renovated to be a living space / workshop). Griffin Johnston and Austin Leddusire are a couple of those good friends. Griffin made sure I didn't breathe in too much sawdust all by myself, and Austin gave life to the camper with electricity. We spent hundreds of hours working on it and pulled a lot of all-nighters: building until the sun came up, listening to Peter Cat Recording Co., and drinking really good coffee. It was crazy, the most fun I've ever had, and I can't wait to do it again.



[www.vardocampers.com](http://www.vardocampers.com)





*“With the help of many good friends, this camper was built a few feet from my bed....”*







Subaru Brat 86-18

## Subaru Brat 86-18

Acronym for “**B**i-drive **R**ecreational **A**ll-terrain **T**ransporter.” A 4x4, built with the support of Subaru USA. Cedar and fiberglass, copper roof, recycled sail tent from Marcos Mafia, woodstove made from an ammunitions case (bought from Etsy). This still is my favorite rethink. The inside is spacious and comfortable, yet it packs up for a very small lightweight load. The only problem is that it’s a two-seater. I built the Tacoma (see p. 132) after this because I needed a vehicle that could accommodate my two kids. Photos by Brian Flaherty





# The Redwood Road Boat

Ben Bloom



*“Inspiration for the camper’s design was largely drawn from old wooden boats.”*

I’VE ALWAYS BEEN A BIT OF A HOMEBOODY, but also love to be on the road. Campers represent the best of both worlds for me: the ability to travel and experience new places without giving up the feeling of comfort I associate with home.

For years I have been fascinated with mobile shelters of all kinds and often fantasized about one day having my own. When I was ready to invest in a camper, I spent a lot of time thinking about what type of vehicle would best suit my needs functionally.

I knew I wanted the camper to be capable enough off-road to take me to remote places, and also be reliable and maneuverable enough to drive daily. Ultimately, a small truck camper seemed like the best choice, and I was excited by the notion of being able to build my own.

Inspiration for the camper’s design was largely drawn from old wooden boats, which I’ve long appreciated for their craftsmanship and whimsicality.

The shell is built entirely from California redwood, which is known for its natural beauty and weather resistance. The roof is covered with

copper sheet metal, and the windows are antique portholes that were salvaged from a retired ship. The exterior is coated with marine-grade clear fiberglass and varnish, which provide protection from the elements and give the redwood a fittingly nautical appearance.

I have often found myself admiring how efficiently boat builders utilize interior space and how cozy the tiny cabins of boats can feel; I wanted this to be reflected in my camper’s interior.

I built a platform over the wheel wells to support a queen-size mattress and a slide-out kitchen that fits underneath—which makes for easy food preparation and storage. The interior is completely modular, so I can add or remove the platform and kitchen easily, allowing more room for cargo whenever I need it.

Having a home away from home gives me a sense of comfort and ease wherever I go, and allows me to focus on the best parts of travel and exploration. The feeling of climbing into the back of the camper in the evenings is tough to beat, and I am excited to spend many more nights in my little road boat.







*“The shell is built entirely from California redwood.”*



*“Having a home away from home  
gives me a sense of comfort  
and ease wherever I go.”*



# Old Red

Rolf Pot

THE STORY OF THE BUS BEGAN A LONG time ago. I grew up in a small town in the north of The Netherlands in the '50s and '60s. There was a gypsy camp some distance away. I was told to be careful passing by there.

I remember as a kid accelerating on my bicycle when I rode by. I do remember seeing a peaceful setup with beautiful wagons, old cars, and colorful people. That experience made a lasting impression on my young brain.

Soon after getting my driver's license at age 18, I bought an old Citroen 2CV wagon. I immediately got to work, converting it into a tiny rolling home, with the gypsy camp in my mind.



It was a basic rig, with questionable brakes. I cruised everywhere; I was happy as a clam. I was sold on homes on wheels.

I moved to New York in 1977 and settled in Santa Cruz in the spring of '78. I found the bus in 1981. When I saw someone putting a "for sale" sign on it, I was sold! It was in very good, original condition and I was able to buy it for \$1,000—pretty much all I had.

As luck would have it, a lot of loose lumber and other useful materials were lying around and I incorporated those in the conversion process, along with other items I had collected over time.

This rig became my mobile home, and I took trips mostly along the California coast. I ended up living in it for about six years, mostly on 225 forested camp acres where I worked, feeling content and at home.

After moving the bus to a cool backyard at the home of good friends in Santa Cruz, I added a hot tub, made from a large, cut-off garbage can. Hot water (from a small on-demand water heater—brought over from The Netherlands in a suitcase) fed periodically into the top of my precious tub; cool water was released through a valve on the bottom of the tub, down



*"I took trips mostly along the California coast."*

the front steps of the bus, and into a gravel pit. I have fond memories of squatting in it for long periods of time, meditating and relaxing.

About five years ago, I moved the bus to into its current location at my Santa Cruz home. By that time, it was in serious need of a renovation. I added a small sauna and removed the steering wheel to make room for a flushing toilet.

Old Red could potentially hit the road again, but by my calculations, I'd probably need a cushion on top of the toilet seat in order to drive the bus.

She has maintained her function as guest quarters and occasional personal relaxation and meditation space for my buddy Teresa as well as for me.

The latest and perhaps most interesting function of the bus began when my good friend Yuji and his dog Moo needed a temporary home. Their house and recording studio burned to the ground last year in fires in the Santa Cruz Mountains, where more than 950 homes were destroyed. As a recording artist, Yuji transformed the bus into his own mini-digitalized recording studio. He lived with us here for about six months.

Old Red has become part of the family these past 40 years. I feel blessed that we are growing old together.





*“Old Red has become part of the family these past 40 years.”*





# Modern Vardo

## Greg Ryan and Jill Baron



*“Traveling with it was like pulling a cartload of puppies behind us.”*



*Wagon inspires impromptu jam session on its maiden voyage.*

**L**IVING ON THE ROAD: A LIFE-CHANGING experience, disorienting and unsettling at first. It wasn't easy leaving the comforts of home and our settled routines, much less adjusting to living in a space smaller than our bathroom. Cold showers, shabby laundromats, never having enough fresh vegetables.

A roller coaster of exhilarating ups and discouraging downs. Living on the road, as with any adventure, tests your mettle. Sometimes we didn't know when or where we'd end up for the night, if we'd have to set up in the dark, or if we'd be safe.

Living in a handmade, rolling home requires hands-on skills. Neither of us is handy or mechanically inclined, and we found ourselves in situations we didn't think we could handle. But digging deep, we found resourcefulness we didn't know we had.

The wagon was a joy to be in, and

traveling with it was like pulling a cartload of puppies behind us. Wherever we stopped, people came running, pressing their faces to the windows. More than once, finding ourselves with no place to stay for the night, we were invited to dinner and to spend the night in the driveway of an appreciative stranger. The wagon was our talisman of goodwill.

On the road, life does become simpler, if no less challenging. Wearing the same clothes day after day, washing hair with cold water from a hose, managing with less of everything. Forgoing dinner to watch the sky turn pink, perched on top of the picnic table with a bag of chips. On the road, you become a bit feral, your intuition keener. More in the moment, less in your own head. With no schedules and no set plans, more spontaneous and receptive.

The wagon was our magic red carpet, a portal to experience not available to

us otherwise. A trek through the desert with a medicine man. An invitation to a Mardi Gras potluck in a tiny village of French heritage, Cajun music blaring from portable radios. Improvisational potlucks and hours by the fire with fellow wanderers we had just met. Everyone with a story. Outdoors, under the stars, everyone open to the magic.

We'll never see most of those people again. But on the road, connections can feel more authentic, more powerful, and remarkably close, even after only a few hours. Our dearest friends include people we met on the road, and those relationships led us to adventures we could not have imagined, including an African camping safari and even a new home in New Mexico. All paths leading back to our gypsy wagon travels.

Changing our lives, changing us.

—Jill Baron





*“On the road, life does become simpler, if no less challenging.”*



*“The wagon was our magic red carpet.”*



#### **VITAL STATISTICS**

- **Floor area:** 84 sq. ft.
- Solar panels charge 12V DC 100Ah agm battery, which runs 2 DC fans.
- Small inverter runs AC loads.
- **Heat:** Suburban 15,000 btu propane heater (turned out to be too big for the space, better choice would have been small Dickinson Marine Cozy Cabin marine heater).
- Hot and cold running water
- Fresh and greywater storage tanks
- Self-contained portable toilet
- Propane refrigerator
- Two-burner propane cook stove





Home/Building/Architecture  
\$32.95 USD

# The New Wave of Rolling Homes



## The Nomadic Revolution of the 2020s



## Handmade Homemade

Vans

All-Terrain Vehicles & Cars

Solar-Powered Vehicles

Pickups with Camper Shells

House Trucks

House Buses

Trailers

Cycles



Shelter



From the Shelter Library of Building Books