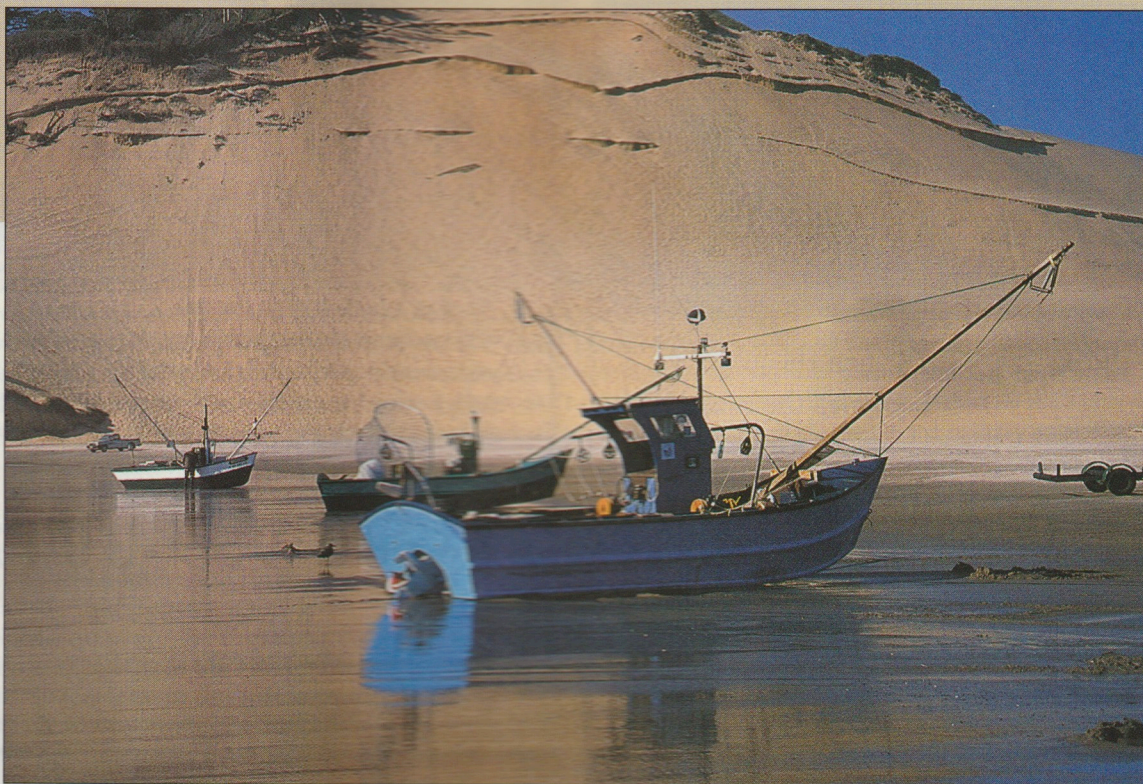


The Pacific City Dory



Simple, able, and rugged

Text and photos by Charles B. Summers

Dawn is about to break over Pacific City, Oregon, the self-proclaimed home of the Pacific dory fleet. Eager commercial and sport fishermen in rusted four-wheel-drive pickups, all towing 20–22' dories, have begun to arrive and prepare for launching. But there is no paved ramp, lifting sling, or docking facility of any kind to assist them—only the gradual slope of a sandy ocean beach.

Undeterred, they simply back their rigs to within a few feet of the water's edge and proceed with preparations for a day of fishing—raising masts, positioning outrigger poles, and generally checking that everything is secure for what might be a rough ride through the surf. Outboard engines, unmuffled in the brisk morning air, roar to life for a few minutes, just so their owners can be sure they will be warm and quick to start.

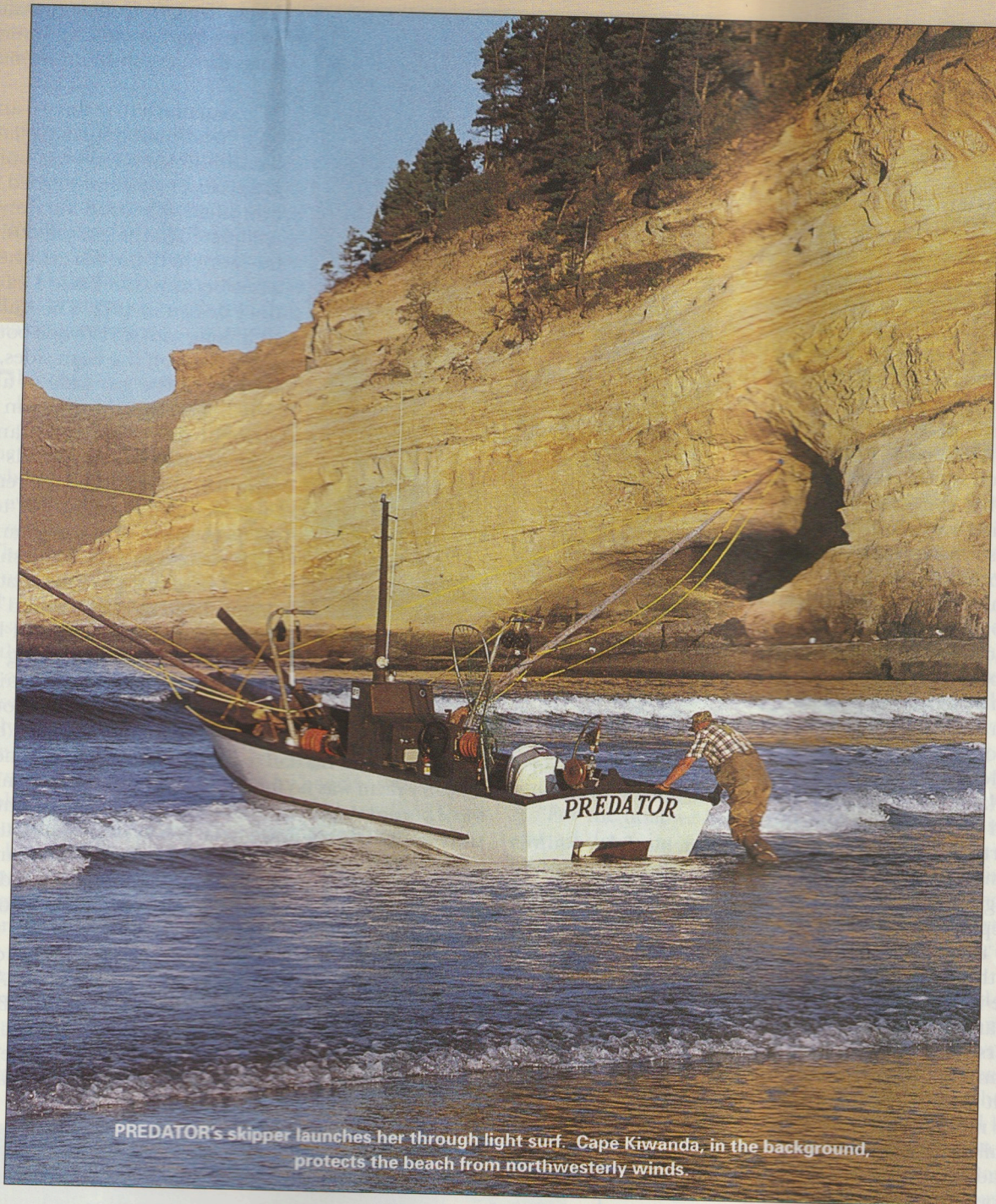
As each doryman is ready to go, he climbs back into his truck, guns it in reverse, then hits the brakes, dumping the boat off the trailer and backwards into the shallow

water. After charging up the beach to park his truck and empty trailer above the high-tide line, he runs back down as swiftly as hip boots will allow and swings the bow of his boat around into the surf.

Pushing from the stern, he wades out into deeper water, looking for just the right wave. When it comes, the bow pops up, dropping the stern low enough for him to place his foot on a transom step. As the wave passes underneath the boat, it raises the stern and helps lift him into the cockpit. Then he quickly lowers the engine, dashes forward to the helm station, turns the ignition key, and powers out over the remaining waves to the fishing grounds offshore.

Most boaters would prefer the convenience and safety of launching their craft in more protected waters, but Pacific City dorymen putting to sea from the beach are following a tradition established nearly a century ago. During the early 1900s, area residents used

Above—Fishing dories rest on the fine sand of an Oregon beach.



PREDATOR's skipper launches her through light surf. Cape Kiwanda, in the background, protects the beach from northwesterly winds.

16' and 18' dories to gillnet salmon in the Nestucca River, but there was no easy access to ocean fishing over the often treacherous bar. However, the massive sandstone of Cape Kiwanda a short distance to the north forms a natural barrier against the prevailing northwest winds and swell. It's not clear who first launched a dory directly through the surf from this protected stretch of beach, but the practice was well established by 1920.

Those early boats were classic double-ended dories with narrow, rockered bottoms. They were typically manned by a pair of fishermen whose combined strength and skill were essential in rowing through the often dangerous surf. When outboard motors became available, a small engine-well was put through the bottom near the

stern. The motor was lashed down in the boat en route to and from the beach, since oars were still considered necessary for safe maneuvering in the surf. But, once clear of the breakers, the oars were set aside, and the engine was dropped into the well for use while fishing.

Pacific City dories were built, launched, and powered that way up through the 1950s. But in 1961 a couple of fishermen from Portland mounted an outboard motor on a square-sterned boat. "That was the first time I ever saw a boat down here go out on power and back in on power," recalled the late Victor Learned, a well-known area fisherman and boatbuilder. "It was a little 15' boat with a 25-hp motor, and we thought they were crazy!"

But, after waiting for hours on the beach just to see

these neophyte newcomers crash on the return trip, Learned and his fellow spectators got quite a surprise. The Portland fishermen had the speed and control to stay between breaking waves without broaching, and slid the boat nicely right up onto the beach.

This caused local builders to experiment with their own designs. At the same time, they increased the size of the boats to accommodate the bigger motors then available. Some tried combining the traditional rockered bottom with a squared-off stern, but the boats wouldn't plane efficiently. The upturn of the bottom forward, however, was retained because it helps lift the bow up and over incoming waves during launching, and also makes broaching-to less likely on the way home.

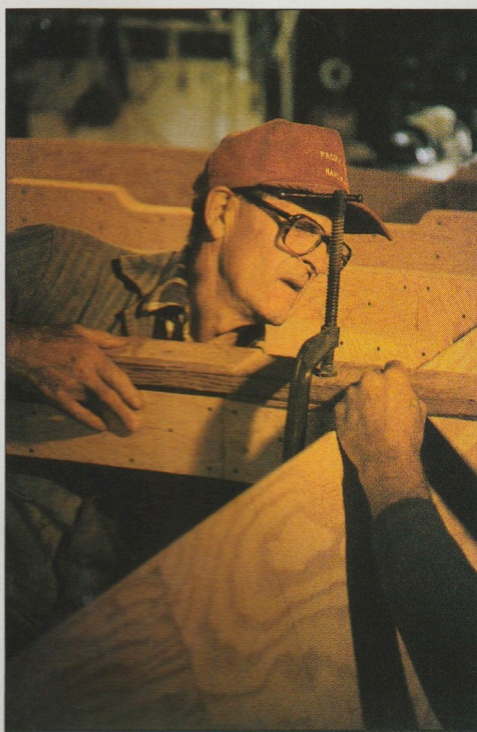
In an effort to reduce pounding, some builders tried adding a V-bottom forward. It worked for boats operating from more normal launch facilities, but boats dropped from a trailer onto the beach have to pivot 180 degrees on the sand in order to be pushed bow-first into the water. Even a small keel, let alone any significant deadrise, would dig in and make turning very difficult.

Furthermore, returning to the beach safely requires dorymen to use plenty of throttle—about 20 mph—through following and often breaking waves. They need to keep the bow from digging in and causing broaching while riding the incoming surf, and they need a flat, smooth surface that will slide up the wet sand and clear of the water.

Learned couldn't remember which local builder was the first to try a straight run aft (instead of a rockered bottom), but it worked well with a 28-hp outboard. "Then I built my boat with a straight run," he said, "and put a 33-hp motor on it. Pretty soon we tried it with 40 hp, then we built the boats a little bit bigger, put in a steering wheel instead of steering with the tiller, and went to 50 hp. Now we don't use much of anything less than 70 hp."

Although some fishermen preferred inboard engines with transom-mounted outdrive units, most Pacific City dories had outboard motors mounted in a well located as much as 4' forward of the stern. A wake port was let through the bottom of the transom to provide room for a long-shaft engine to tilt high enough to clear the bottom while the boat was resting on the beach. In addition to shielding the engine from breaking waves in a following sea, a well allowed commercial fishermen to run an additional trolling line off the stern without fear of their gear fouling the propeller.

Some manufacturers have tried to produce Pacific City-style dories in fiberglass or aluminum, but wood remains by far the material of choice. Most dories have been built by local commercial fishermen like Learned, who earned a



Victor Learned works on a new dory in 1990. He died in 1998, at the age of 78, after 60 years of building wooden surf dories.

decent living by trolling for salmon in the summer and by building boats during the winter months.

Learned's first dory—an 18' traditional, spruce-planked double-ender—was built in 1938. His first square-sterned, flat-bottomed, plywood version was completed in the early 1960s, and he launched the forerunner of what became the basic Learned dory design in 1971. The hull was 21'3" long with a 5'6"-wide bottom, a 20° flare on the high sides, and a beam at the gunwale of about 7'10". The flat bottom ran in a straight line from the transom approximately two-thirds the length of the boat, and the remaining one-third swept up 10" to 12" to meet the heel of the stem. The rails swept up to the high, sharply raked stem that gives the boat what Victor liked to call a "proud" look and reduces the chance of being overwhelmed by a breaking wave.

Learned's son Terry built his first dory in 1975, and at about the same time other fishermen began

asking him and his dad to build boats for them. The family dairy farm was no longer in operation, so the milking barn became a perfect shop area. Terry helped out part-time while holding down a day job in heavy construction, and the two produced nearly 75 boats in the years that followed. The men were later joined by Terry's daughters—Annie and Pam—who began learning how to build boats at an early age.

"I've been working with my dad and my grandpa in the shop since I was about 11," says 27-year-old Annie. "Initially, I wanted to build and fish my own boat. But the fishery was pretty much finished by the time I got out of high school. I'd love to build boats full time if we could get enough business, but now boatbuilding is going the same way as fishing."

In fact, by 1990, diminishing salmon runs and shorter seasons had cut the commercial dory fleet at Pacific City from over 350 in the 1960s to about 75 boats. The demand for new boats also dropped dramatically, leaving the Learneds as the only commercial builders of wooden Pacific City dories still active today.

By the time Victor Learned died in 1998 at the age of 78, production had been reduced to a couple of boats a year. In 2000, Terry and his daughters received only one commercial order, but the publicity from an article about the boat in *National Fisherman*, plus improved salmon fishing, prompted two more orders in 2001 and prospects for more future business.

"The boat we're working on now," says Terry, "is for an 84-year-old sport fisherman from McMinville, Oregon. He bought a dory in 1969 and just about wore it out. So now he wants a new one. The next boat will be for a guy in Florida. He saw the specs in the magazine article and

As his daughters Annie and Pam hold the plywood side-panels, Terry Learned fastens the panels to the stem.

came clear out here to look at our boats. He's well over 6' tall and said most East Coast boats have so much flotation that you stand too high off the water, and such low gunwales that they hit you below the knees and make it too easy to fall overboard. But he said our boat was exactly what he wanted, and he'll come get it when we finish building one for him early next year."

The construction process begins with five 4' x 22' sheets of $\frac{3}{8}$ " five-ply marine plywood—two for the sides and three for the double-thick bottom. Although such long sheets of plywood were once readily available directly from a mill, the Learneds now find it hard to buy even good-quality 4' x 8' sheets that can be scarfed.

"The plywood panels have to be absolutely square for scarfing," says Terry. "If it's $\frac{1}{8}$ " off when you put the top panel down on the bottom one, you won't have a perfectly straight edge on the finished panel. Some we got recently from a local supplier weren't square, so this time we drove all the way up to Edensaw Lumber in Port Townsend, Washington. It was a 14-hour round trip and the plywood cost more, but at least the panels were square."

Terry and his dad used to scarf by hand with a router. "It took us all day just to cut the bevels," he recalls. "Then we bought the John Henry scarfer with carbide cutters and a big Makita planer. It's like driving a Cadillac by comparison, and we went from a two-day operation to cutting all the angles in an hour. We put plenty of epoxy glue on the 3"-wide joint, stack the panels with felt and waxed paper between so they won't stick together, and put plenty of pressure on the joints with our custom-built clamps. We want the joints in the finished panels to be as flat as possible."

The rest of the wood in the boat usually is old-growth Douglas-fir. "We put old-growth wood on anything in the



boat's main structure—frames, longitudinals, keelsons, and bow stem," says Terry. "When you drive a nail into it, it won't split. It's got longevity because there is a natural resin in the wood that acts almost like a preservative, something you don't get in second-growth."

Old-growth, of course, is not as plentiful as it once was, even in the heavily forested Pacific Northwest, and top-quality fir takes extra effort to find. Nevertheless, the Learneds have developed a variety of sources, including local sawmill operators who occasionally find a choice log in the nearby forests of Oregon's Coast Range. They also take to the road in hopes of discovering a chunk of usable wood tucked away somewhere in a lumberyard.

"For the boat we built last year," confirms Annie, "we started down in Newport and came all the way up the coast, stopping at six different yards. We were looking for straight grain cut from the outside part of the log, but we found only three boards we could use for frames. Everything else was either from the heart center or it was knotted up."

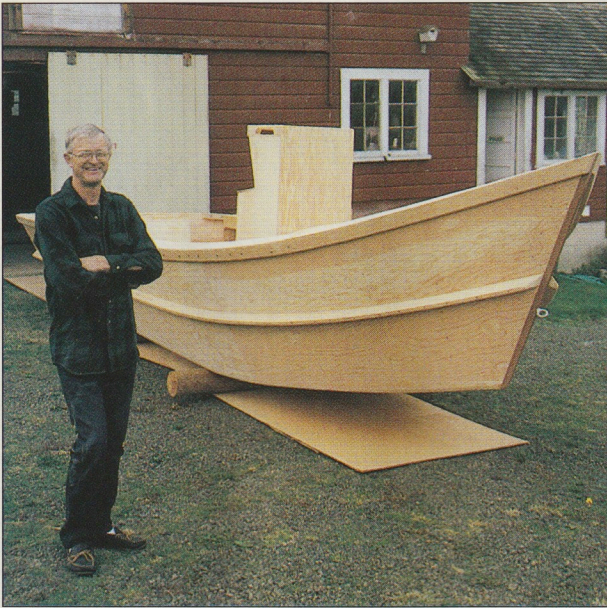
More recently the Learneds have been getting old wood from a unique source a few miles north near Tillamook. "Heavy flooding in 1996 washed a lot of logs downriver that probably fell from the Tillamook burn way back in 1933," explains Terry. "There's a guy up there who has hauled it out of the river, cut it up, and has it for sale. Almost 100% of the wood in those logs is still good, because any of the bad stuff on the surface got knocked off on the rocks coming downriver."

Once the fir has been planed down to $\frac{1}{8}$ ", all the individual parts that make up the frames and transom are pre-cut. The measurements and angles for each piece are taken from a loose-leaf notebook in which Victor and Terry kept track of every step in construction throughout the years.

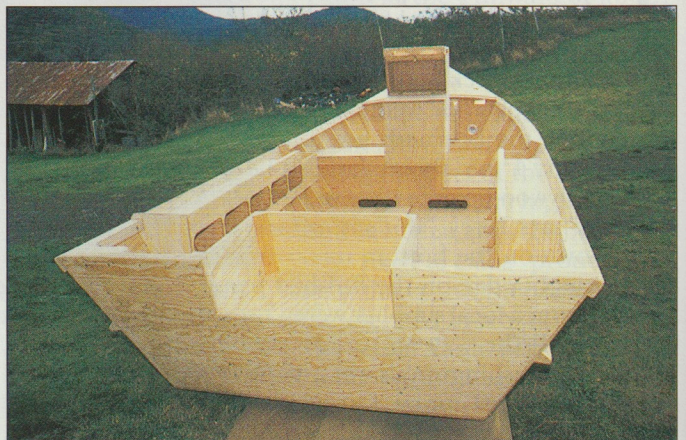
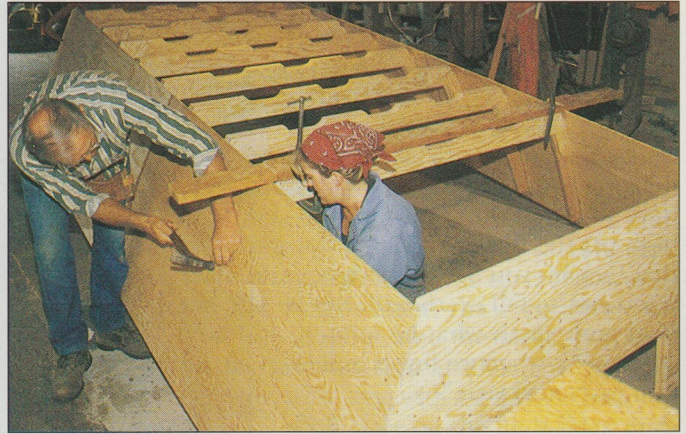
"When we started building boats for other people," says Terry, "we first copied the boats



Pre-assembled frames are inserted into the inverted hull from below. Clamps secure the frames to a temporary cross bar.



Above—The builder stands next to the nearly completed dory as it emerges from his ex-dairy-barn shop. The tall stem and rockered forefoot help the boat work in heavy surf. **Upper right**—Terry Learned drives a stainless ring-shank nail while Pam holds a bucking iron against the inboard face of the frame. **Lower right**—The Learneds recently switched from motorwells to transom mounts; a splash-well keeps the Pacific Ocean out of the bilge.



we had built for ourselves. As parts fit together, we just wrote down the angles and dimensions and continued to refine them until we had developed a complete set of working drawings and instructions. Dad never was much for the technical side of building or the mathematics of using a jig. He knew what he wanted and just kept working the wood until he got it.”

Using the carefully recorded information from years of trial-and-error experience, the boat is built around its own structure—the stem, frames, transom, and pre-cut side panels. “We do a lot of preassembly work first,” explains Terry. “For example, we put together all fourteen frame sections, eight of which are identical in the after two-thirds of the hull. As the others go toward the bow, each one is a little narrower and closer together. We cut the bottoms and two side pieces for the frames from $1\frac{1}{8}'' \times 4''$ fir, place them in a jig on the bench with the proper angles, then glue and nail them together with $\frac{3}{8}''$ plywood gussets at the corners. Then we notch them for the chines and keelsons.”

In the past, the transom was prefabricated to accommodate either the traditional outboard engine-well or an outdrive unit. However, the Learneds’ most recent customers have chosen transom-mounted outboard installations.

“This leaves about 11’ of clear deck space aft,” says Terry. “It makes the steering quicker—and steering in reverse is better, because the engine isn’t so far forward. Also, in a following sea, you don’t have to worry so much about getting flooded out with water coming up through the well. The outboard engines being used now range

from 70 hp all the way up to 115 hp, so I’ve added a lot of $1\frac{1}{8}''$ -thick solid fir to reinforce the $\frac{3}{4}''$ plywood. Plus, there are two knees—made with three laminated layers of $\frac{3}{4}''$ plywood—that run between the bottom and halfway up the transom, and I’ve installed large quarter knees.”

All these pieces are assembled, upside down, without the aid of a jig. The Learneds begin by gluing and nailing the two 22’ sides to the beveled edges of the stem—a $4'' \times 8'' \times 5'$ piece of clear fir. Although Terry and his dad accomplished the task by themselves, having both daughters—each one holding a side panel—makes the job of fastening them to the stem a little easier. Then they pull the side panels together at the stern, and glue and nail them to the transom.

Next, beginning with the forwardmost of the eight identical frames and working aft, each frame, its edges coated with glue, is inserted up between the side panels from below (with the boat still inverted), carefully positioned to the marked stations, and nailed in place. With the straight-sided sections of the hull held solidly, the remaining frames are similarly installed inside the forward third of the hull.

When all the glue joints have had a chance to dry, three $18' \times 4'' \times 1\frac{1}{8}''$ bottom stringers and two $19' \times 2\frac{1}{4}'' \times \frac{7}{8}''$ chine logs are fitted, glued, and fastened along the pre-notched frames. After careful planing and sanding to ensure that all surfaces are in perfect alignment, two layers of $\frac{3}{8}''$ plywood are nailed and epoxy glued to form the bottom. Spray rails and a hardwood outer stem are added before the hull is rolled out from under the barn’s low ceiling, flipped right-side up, and pushed back inside.



Tom Stevens retrieves his Learned dory after a day of fishing. An electric winch on the custom tilt-trailer eases the job.

The bow is then decked over with $\frac{3}{8}$ " plywood to approximately 54" back from the stem, and an 18"-wide, 24"-deep 'thwartships fish box fills the space between frames 8 and 9 just forward of a center steering console.

The sometimes brutal use of these boats through the surf or out in the ocean requires special attention to strength and durability. After reading a research report some years ago on the comparative holding power of screws and nails, Terry and his father decided to use stainless-steel, ring-shank nails as fastenings, except where $\frac{1}{4}$ " hot-dipped, galvanized carriage bolts are more appropriate.

"Another dory builder tried a nail gun once," says Terry, "thinking that would be a good idea for making the nailing go so much faster. But the sides and the ribs came apart the first time through the surf, and the whole boat had to be renailed. The problem is that the gun shoots the nail through the wood so fast that it doesn't suck the wood together nearly as well as with a hammer."

The glue—System Three epoxy—adds even more strength and rigidity. "We figure if it was possible to pull all the nails out," says Terry, "the glue would still hold the boat together. It has got good gap-filling properties and a normal two-to-three hour pot life. But we sometimes put it in the freezer overnight so it will last until the next day. That way you don't waste as much and can keep the cost down."

When it comes to finishing these boats, varnished brightwork and glossy paint just aren't practical. Although the inside surfaces are stained and sealed, the exterior receives a heavy coat of fiberglass roving and resin sprayed from a chopper gun and finished with colored gelcoat. The latter not only provides long-term, low-maintenance protection of the wood, but it makes the boat slide easier on wet sand—better than either bare wood or aluminum.

As a result, before final outfitting and installation of the engine and electronics, Terry sends his boats down to Jim Allen's fiberglass shop in Pacific City. "The 'glass on the bottom and around the chines is about $\frac{3}{16}$ " thick, because they take such a beating," says Allen. "The


colored gelcoat is put on last with a roller and smoothed out with a brush. These are commercial workboats, so no one is very fussy about the finish. In fact, most of the guys leave the choice of colors up to me, which makes it fun, and I try to make them all a little different."

For example, Allen finished last year's boat with a combination of bright red and yellow. Owner Tom Stevens of Clackamas, Oregon, had

dropped out of commercial fishing 10 years earlier, but he got the bug again and ordered this new boat. It was the Learned's first model built for a transom-mounted engine—a 90-hp four-stroke Honda—and cost Stevens around \$20,000, including the motor.

"I've been familiar with the Learned dories ever since I first starting fishing out of Pacific City," says Stevens, "back when I was still in high school. They build a bulletproof boat—one that catches fish, runs out real nice, and takes rough water well. It's a tough working boat, but I think it's a real eye-pleaser, too."

Those who think more in terms of varnished mahogany or oiled teak, however, may not agree or fully appreciate the beauty of a wooden boat covered in brushed gelcoat. Yet, to serious fishermen like Stevens, the true value of these trailerable, square-sterned, flat-bottomed dories is in their functionality—a design and structural strength that enables them to be launched and retrieved, year after year, through ocean surf.

The relatively simple and low-cost construction of Pacific City dories has also provided affordable, entry-level access to commercial fishing. In fact, many veteran West Coast fishermen now operating much bigger boats in other fisheries, got their start years ago on the beach next to Cape Kiwanda—launching wooden dories into the surf, not unlike the way many fishermen around the world have gone to sea for centuries. 

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Builder Terry Learned can be contacted at Learned Boat Shop, 36150 Highway 101 South, Cloverdale, OR 97112; 503-392-3278.



This fisherman rows out through the surf before lowering his outboard motor, but most dorymen power through the breakers.