

Digging Into Ground Tackle

Anchor Evaluations and Anecdotes

By Associate Editor **Marty Loken**



Manson Supreme Anchor

Much of the time, while denying an interest in speed, we focus attention on how to keep our small boats moving, or moving faster—stewing quietly over whether we have the most efficient sails, rigging hardware or even electronic devices to help improve performance. We like to make the most of what we’ve got, whether sailing a Potter 15 or a racy little catamaran. Less often do we seriously consider how to keep our boats *completely stopped*—anchored properly and safely, with the best equipment for the job.

When it comes to anchors, it turns out we are creatures of habit—maybe including some old and unhealthy habits. We rely on the tried-and-true, the familiar, and maybe even the unreliable...simply because the old standard is what we grew up with.

A few months ago we polled *Small Craft Advisor* readers on the subject of anchors used, along with related equipment, on boats up to 22 feet on deck. We asked about types and brands of anchors; the kinds of sea bottoms you’re typically setting your anchors in; the boats you’re rowing, sailing or motor-ing; whether you’ve changed your ground-tackle preferences through experience, and what kinds of war stories you might be willing to share on the anchoring subject. And more.

Congratulations—you came through with a trove of responses. Some were surprising, many about what we expected, and all of your comments were fascinating. The central message coming out of the survey might be that too many of us continue to rely on older-design anchors that in some cases might put us and our boats in danger. Without overdramatizing, it might be time for many of us to take a fresh look at anchors we’re using and consider upgrading to designs that score higher in comparative ground-tackle tests.

Here are some basic results of our survey:

BOATS OWNED BY READERS

Before we get to anchors themselves, it’s important to know the kinds of boats *SCA* readers are anchoring, since a survey of much larger, heavier boats might produce wholly different

results. Boats owned by survey respondents ranged from 12 to 22 feet overall, averaging 16’-6" on deck. Most of our boats have light displacement—they’re often manufactured trailer sailboats with a healthy smattering of homebuilt wooden boats. Few of them weigh more than about 1,500 pounds, fully loaded, and many are down in the 600-900-pound range.

The most prevalent sailboats owned by readers taking part in the survey were, in top-to-bottom order:

- Com-Pac 16
- O’Day Mariner 19
- West Wight Potter 19
- West Wight Potter 15
- Sea Pearl 21
- Scamp (11’-11")
- Montgomery 15
- Peep Hen (14’-2") and Mud Hen (17’-4")
- Montgomery 17
- Welsford Navigator (14’-9") and Pathfinder (17’-4")
- Wayfarer 16
- San Francisco Pelican (12’)
- Dovekie (21’)
- Cape Dory Typhoon (18’-6")
- Core Sound 17
- CLC Northeast Dory (17’)
- Drascombe Lugger (18’)
- Longboat (21’-9")
- Sage 17
- Devlin Nancy’s China (15’-3")
- ...and scores of other designs, builders and models.

FAVORITE ANCHORS

Our readers are using everything from the most expensive, high-tech anchors on the market, down to coffee cans filled

with concrete (one brave respondent). We’ll get more deeply into the characteristics of each anchor type a bit farther down, but here are *SCA* readers’ most-often-deployed anchors:

Anchor Brand or Type / % of Respondents	
Danforth, or Danforth-type	53%
Bruce, or Bruce-type claw (some Lewmar)	17%
Rocna, Manson, Mantus, other spade style	7%
Delta or similar plow type, fixed shank	5%
Mushroom type	4%
Folding grapnel type	4%
Fortress aluminum alloy (Danforth style)	3%
CQR articulated plow	3%
Fisherman type	2%
Navy type	1%
Other	1%

EVALUATING DIFFERENT ANCHORS

You might be surprised to learn that the best-selling American car, from the beginning of automotive production, is the Ford Escort, which in 1980 replaced the lowly Ford Pinto and was eventually succeeded by the Ford Focus. That doesn’t mean the Escort was the best car ever built—just that it had the highest sales total during its production run.

In our world of small boats, the Danforth-style anchor might be described as the Ford Escort of ground tackle: It has been produced and sold in huge numbers; it’s affordable compared to some other models, and it has been widely accepted as a reliable “standard” in the boating community, even if it is no longer the best available.

We knew when distributing the anchor survey that the Danforth would probably top the popularity list, but we were surprised to learn that a whopping 53% of *Small Craft Advisor* readers are carrying Danforths on their boats (sometimes as a backup or number two anchor, but most often as the main go-to anchor), and that the second-place anchor (Bruce or Bruce type) lagged far behind with only 17% of the vote. (It’s not that we thought the mixed-review Bruce or any other particular anchor would be a top pick—it’s just that the gap between first and second place was stunningly wide.)

There are a lot of good things to say about Danforths, maybe especially for use on smaller boats in calm conditions, since they lie flat on deck (easier to stow than most of the newer, more effective designs); they tend to be fairly light for their relative pounds of holding power, and they set on either side of their symmetrical flukes, so they’re never upside-down.

You’ll hear this statement several times as we troll through the list of anchors: “Beware of knock-offs” that appear to be Danforths, or in some cases are even retailed falsely as Danforths. The construction quality and performance of Danforth clones is famously awful when compared to the original Danforth design (now manufactured in Atlanta by Tie Down Engineering).

The Danforth was designed by American Richard Danforth, and most current “real” Danforths are based on his

1948 patent. The original concept was to produce an anchor superior to the articulated-plow CQR design, developed in England in the 1930s as an improvement on the ancient Fisherman style. Outperforming the CQR turned out to be a fairly easy task, since according to modern anchor designer Peter Smith of New Zealand, “using a CQR is, without hyperbole, rather akin to the use of cotton sails and oil lamps on sailboats.”

But, back to the Danforth and its huge popularity among owners of small craft. For many *SCA* readers, anchoring is mostly something done while having lunch during a daysail, or maybe for a few summer nights in a quiet cove, during a short cruise. According to survey results, not many of you are using Danforth anchors on major heavy-weather expeditions, or to anchor boats that are left unattended for weeks or months at a time. Good thing, because Danforths and especially their less effective lookalikes perform poorly in many anchoring tests—often holding just fine initially but losing their grip when tidal changes or wind shifts swing the boat around on the anchor, sometimes causing a failure to reset and resulting in the anchor being dragged flat across the bottom, often accumulating a wad of grass or weed during the meander.

Here are a few Danforth survey comments from *SCA* readers:

“My boat came adrift when I wasn’t aboard, when a wind shift caused the chain to wrap around the crown of the anchor and pull the Danforth out backwards. I no longer use a single Danforth to anchor when not aboard.”

“The pivoting flukes...would jam with small stones, preventing the anchor from achieving the proper setting angle, resulting in no set on a sand bottom.”

“The Danforth snagged in a thick-grass bottom, in 20-knot winds. Swinging caused the Danforth to saw through the thick grass, dragging an accumulation of grass along the bottom. I woke up and found myself about four miles upriver from where I’d anchored. Thankfully, the wind blew me upriver rather than into the open Chesapeake. That’s when I got another anchor.”

“I anchored in sand right off the beach with a Danforth for almost a month. One of those days the tide and current shifted and pulled the anchor out. As I was sitting on the beach, I happened to notice my boat slowly drifting out to sea. It’s just fortunate I was there to observe what was happening, and to swim out and rescue the boat.”

And, finally, this from another reader:

“Every boat I’ve seen adrift has had a Danforth tied to it.”

Ouch.

Before you leap out of your chair to buy a replacement for your Danforth, let me make a few personal observations. First, because Danforths and their clones have so dominated the market during our lifetimes, they must be doing something right, and due to their strong market penetration and the sheer number of Danforths out there, you’re bound to hear more horror stories about the design. (Just as you might hear more complaints



Drascombe Longboat with two anchors set.

it” anchors. It does poorly in most serious testing when compared with newer designs, and it has a few specific downsides: Lighter Bruce anchors or Bruce knockoffs don’t set well in harder bottoms, so you need a bigger, heavier Bruce if you hope to compete with some of the new and lighter designs; and the Bruce tends to break loose more often than others when wind shifts or tidal changes spin the boat around, causing the anchors to lose their grip, sometimes skipping along the bottom—especially in harder seabeds.

The Bruce is at its best in sand, mud and soft clay, but in tests it often fails to set in weeds when compared to other newer designs. Another downside is that the Bruce and other claw-style anchors are awkward to stow on deck, although it nests comfortably on most bow rollers.

Some survey comments from SCA readers:

“On Georgian Bay, in Kidd Bay off White Cloud Island, we were well-protected from southerly winds. However, as the wind increased overnight waves refracting into the bay caused the Bruce to drag (detected by our GPS alarm). Surprisingly, given the hard clay bottom, kedging with the Danforth saved the night.”

“I grew up with Danforths, and heard about how British small-boat cruisers would keep their rode and Bruce anchors in a bucket. I couldn’t figure out how one would do that with a Danforth, then I learned about Bruce knockoffs that actually could fit in a bucket. I’ve since moved to a Manson Supreme for much easier setting than my Bruce-type claw.”

“On lakes we like to deploy our Danforth off the bow, then back in and take a Byers (Navy-style) anchor to shore. On the ocean we use the Bruce anchor with 25 feet of heavy-duty chain to handle tides, and do not run a second anchor to shore.”

Our personal experience with different-sized Bruce or Lewmar (Bruce pattern) claw anchors is mixed, and we’ve stopped using them altogether as a result. Even though bottoms in our area tend toward soft clay and gooey mud, we’ve had some trouble getting lightweight Bruce-type anchors to set consistently. The heavier Bruce anchors have set quickly, but after one memorable experience in 30-knot winds, where we had to rescue our boat after the Bruce dragged a wad of grass across the bay, we shifted to newer and more efficient designs.

ROCNA AND SIMILAR ROLLBAR DESIGNS

New Zealand sailor Peter Smith developed the Rocna design after completing a 20,000 nautical-mile voyage from England to New Zealand, using his anchor-of-choice at the time, a heavy Delta fixed-shank plow anchor. Here are his comments on the experience: “...It was this voyage and the problems experienced—dragging in the soft mud of the Chesapeake and New Zealand rivers; the grassy bottoms in New Zealand’s lower South Island; difficulty getting a set on the thin coral layer in the Bahamas; problems with swinging room in the crowded anchorages of Rhode Island and Maine, and disconcerting events such as the boat not being where we left it because the wind changed direction!—that led to

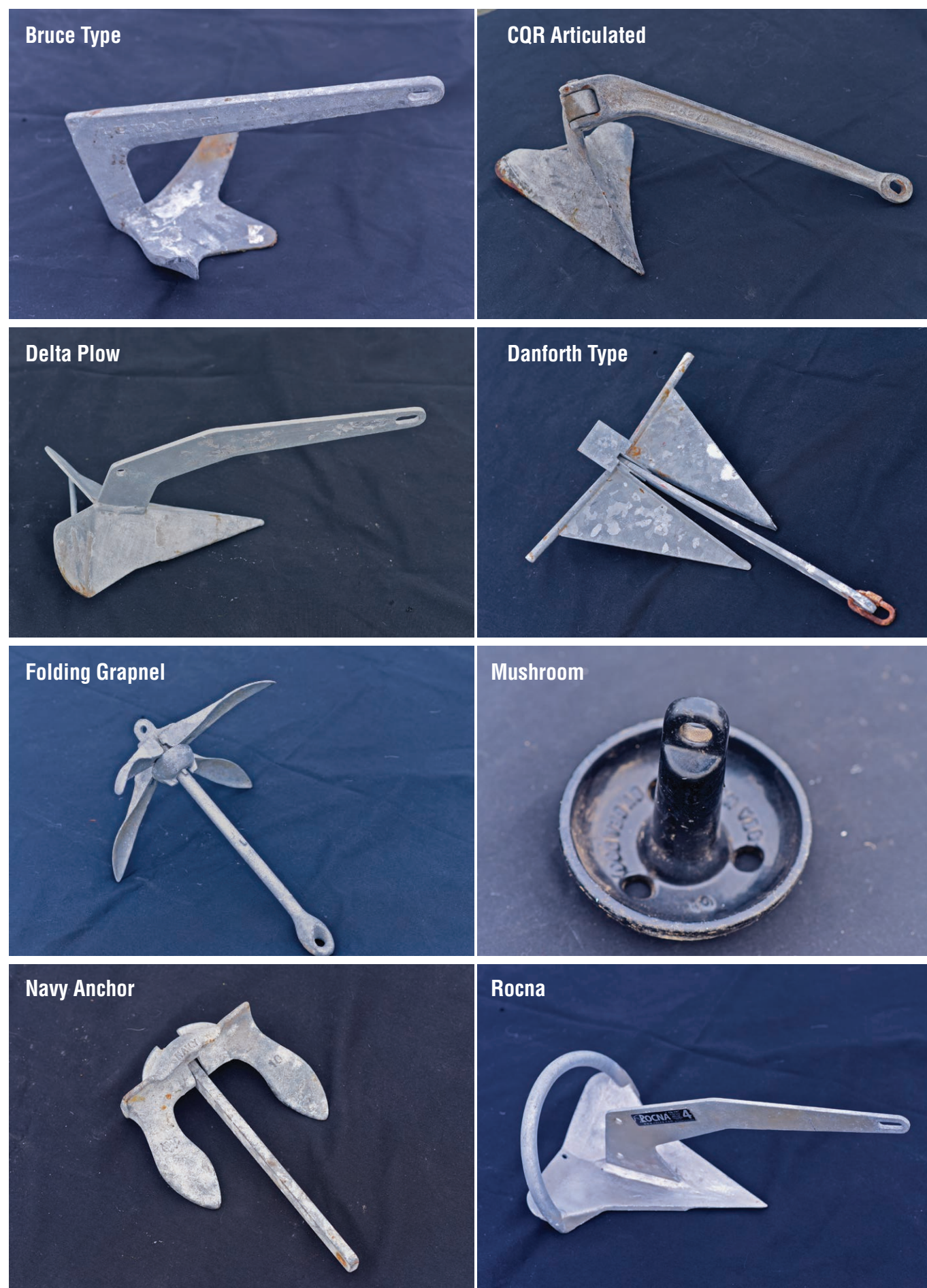
about Ford Escorts than about Edsels.)

Repeating the caution about buying Danforth knockoffs, I’ve had three personal Danforth-type failures that involved the design’s inability to always reset when spun around during tidal or wind shifts. Once, the flukes jammed into a fixed position when a rock became lodged between one of the flukes and the shank. During a wind shift or tidal change, the boat apparently floated directly over the anchor and rode, causing the anchor to flip to its other side. With the jammed flukes then pointing skyward, the anchor dragged hopelessly across the bay...and we were lucky enough to wake up before ending on the rocks. On two other occasions with different boats (and when we weren’t aboard), Danforth anchors failed to reset and ended up gathering a slippery balls of seaweed, allowing the boats to drift across our local bay. Today, I still carry one Danforth aboard our sailboat, using it as a second anchor off the stern when anchored in narrow, rock-lined coves. (Our main anchor is a Rocna, set off the bow. After setting the Rocna, we haul the Danforth toward shore in the dinghy, setting it firmly in near-shore mud or sand, then draw the stern anchor line semi-taut so that the boat does not swing wildly in the night. The Danforth is great in that kind of role—fairly light in weight, easy to stow and quick to set in the right kind of bottom. Just don’t count on it as your only anchor, when your boat is liable to swing 180 degrees in the night, during a wind shift or tidal change...and especially in a strong blow.

BRUCE OR BRUCE-TYPE

Coming in a distant second place in our survey was the Bruce anchor and its clones. (The original Bruce, developed by Peter Bruce of the UK in the 1970s, was popular for years because it addressed some of the CQR and Danforth problems of setting reliably. Original Bruce anchors are no longer produced, except under the Lewmar label, and there are a lot of inferior knock-offs that will never perform as well as the original pattern, so beware.)

The Bruce today appears to be one of those “love it or hate





Canoe-yawl Eel, Skye, resting at anchor.

couldn't pull it up."

"The Manson Supreme is much easier setting than my claw anchor."

Personal comments: About the only downside I'm aware of with the modern rollbar anchors is that they do not nest in some bow rollers that feature rode-capturing hoops. Otherwise, they're personal favorites and I'll continue using Rocna and Manson Supreme anchors as our primary, go-to anchors... at least until something better comes along. I love the way they immediately and easily set in different bottom conditions, and how they've never yet failed to reset when wind and tidal conditions swing the boats 180 degrees off of the original set. While the Rocna brand has slightly outperformed the Manson Supreme in some tests, so far I haven't been able to distinguish between one and the other—they're both terrific.

DELTA AND SIMILAR PLOW ANCHORS

The original Delta plow anchor with fixed shank does well in most independent tests, but only 5% of *Small Craft Advisor* readers said they used Deltas (or their several clones, which perform more poorly than the original).

Delta-style plow anchors generally do well in sand, mud, rocks and clay, but sometimes fail to set or reset efficiently in weeds. They appear to be a good choice in normal, non-extreme small-boat anchoring situations, and they nest nicely on typical bow rollers.

I've personally used a smaller Delta plow on boats in the 16'-20' range, but not when leaving boats unattended for long periods. They set quickly and do fine when you're anchoring overnight in mild conditions and remaining aboard.

MUSHROOM ANCHORS

Most of the 4% of *SCA* readers who reported using mushroom anchors were like me—dropping them overboard as a lunch hook, or deploying them as a second stern anchor, often with a stretchy Anchor Buddy-brand line to keep a bit of tension on the stern anchor. (When we have small-boat messabouts, I love using a mushroom anchor and Anchor Buddy combo to keep our small boat just off the beach, in the event of wakes from passing powerboats that might damage smaller boats hauled on the edge of the shore. You just attach the rubber-band-like Anchor Buddy line to your bow cleat and to the mushroom anchor, then tie a 100-foot quarter-inch retrieval line to the mushroom anchor. Set the anchor on the edge of your foredeck, ready to teeter off into the water; give the boat a hard push into deeper water and trip the retrieval line when your boat hits maximum depth....typically less than six feet of water where we live. Tie the retrieval line to a tree, log or another anchor ashore and when you're ready to leave, just drag the mushroom anchor and boat back to the beach.)

Most mushroom anchors are great for short-term lunch hooks in calm conditions, but unless you're anchoring something like a sea kayak I'd never trust them for overnight use.

FOLDING GRAPNELS

These are the best small-boat anchors if storage space aboard is more critical than holding power in all conditions. Folding

grapnels collapse into an amazingly small, cylindrical package and they can serve as the main anchor for very lightweight small craft...or as a backup or picnic anchor.

Like the mushroom anchor, folding grapnels are enjoyed by 4% of *SCA* readers who took part in the survey. (We always carry one folding grapnel down in the bilge, just in case. Why not?)

FORTRESS ALUMINUM-ALLOY

The Fortress (3% of *SCA* readers) is a lightweight aluminum-alloy takeoff on the original Danforth design, and it does well in many anchor tests—especially considering how light it is alongside some competitors. Price can be daunting to some small-boat owners, since a 7-pound Fortress might cost \$160, vs. about \$40 for a theoretically comparable (but deficient) Danforth clone.

We only have a few Fortress comments from *SCA* readers:

"Anchored in the San Juans, the Fortress had wads of eel grass jammed into it and wouldn't hold. The wind at the time was in the upper teens, with an opposing current. I had to raft up to another boat to clean the grass off, which caused the other boat to drag its anchor..."

"The Fortress failed in a sandy bottom in the middle of the night, with 20-plus knots of wind. We had to reset it three times!"

CQR ARTICULATED PLOW

Like many others with "set-in-our-ways" assumptions about different anchor designs, I always thought that the efficient-looking CQR anchors, with their hinged shanks were top of the line in efficiency. We were thrilled when our larger 26-foot cruising boat, a pilothouse sloop from the 1950s, came equipped with an expensive 25-pound galvanized CQR on the bow roller.

What a disappointment when, over a period of months, our unattended sailboat went for joy rides across Mystery Bay, easily dragging its flopped-over CQR across the bay in 30-knot winds. (The anchor had gotten a terrific and immediate bite during the initial set, but clearly failed to reset on one of the occasions when the rode did a 360-degree spin during a tidal change and/or wind shift.) We have a generous amount of chain and always plenty of scope, so it was shocking to witness total failure of the anchor we'd always idolized—a big, old CQR.

In the *SCA* anchor survey, only 3% of readers reported using a CQR, and in looking more deeply into independent anchor tests we now realize how poorly the once-vaunted CQR does against most newer designs, especially the modern rollbar or spade anchors.

So, the CQR can set nicely in softer bottoms, but it can tend to fail in harder bottom conditions or in weeds. And as we've learned, once the poor thing flops over on its side and starts dragging a pile of weeds, you'd better hope that you're aboard and wide awake—or that you have observant neighbors who call you late one night to report that your boat just drifted past theirs in the bay.



Herreshoff America anchored in Mystery Bay.

AND, FINALLY...

Let's wrap up with the ancient Fisherman (2% of *SCA* readers), the Navy anchor (1%) and "Other" (the final 1%, including a few Northills and our creatively frugal guy with the concrete-filled Folgers can).

As our survey demonstrated, most *Small Craft Advisor* readers tend toward daysailing, and their overnight adventures are mostly inshore—this side of the open ocean. As a result, many readers who haven't tested their ground tackle in severe conditions appear comfortable with the anchors they've been using, and may feel little urgency to make changes. But anchoring gear is always worth reconsidering, as we've learned from personal experience, and if you haven't upgraded for a few decades it might be worth checking newer designs on the market.

Anchoring can be one of the most challenging and occasionally terrifying parts of boating. (When we were kids, sailing aboard an old 1930's wooden sloop, our parents were mostly nonchalant boaters—the only major rule being that my sister and I had to wear life jackets. The only time I ever heard my normally-calm mother scream bloody murder was off of Stuart Island in the San Juans, about 3 a.m. when she realized our anchor was migrating across the bay and we were about to land on the rocks. You never forget the fire-drill excitement of dragging anchor in the dark, with your Mom shrieking in the adjoining cabin: it's a memory I think of every time we anchor overnight in seemingly quiet coves.)

When things go well, anchoring away from marina docks, out in back bays of lakes, rivers or saltwater coves can be the finest baby-cradle experience we have when boating. When things go well, we claim to "sleep better than ever while at anchor." So, to quote one of the *Small Craft Advisor* readers who participated in the survey, "Anchor early and anchor often." You'll love it, and maybe even more so when you've deployed one of those newer-design anchors. •SCA•

Editor's note: For specific anchoring techniques see SCA issue #80's "Anchoring Techniques" by Terry Johnson, issue #76's "Anchoring Tips" by John Welsford, and "Anchoring Small Craft," by Ron Hoddinott in issue #38.