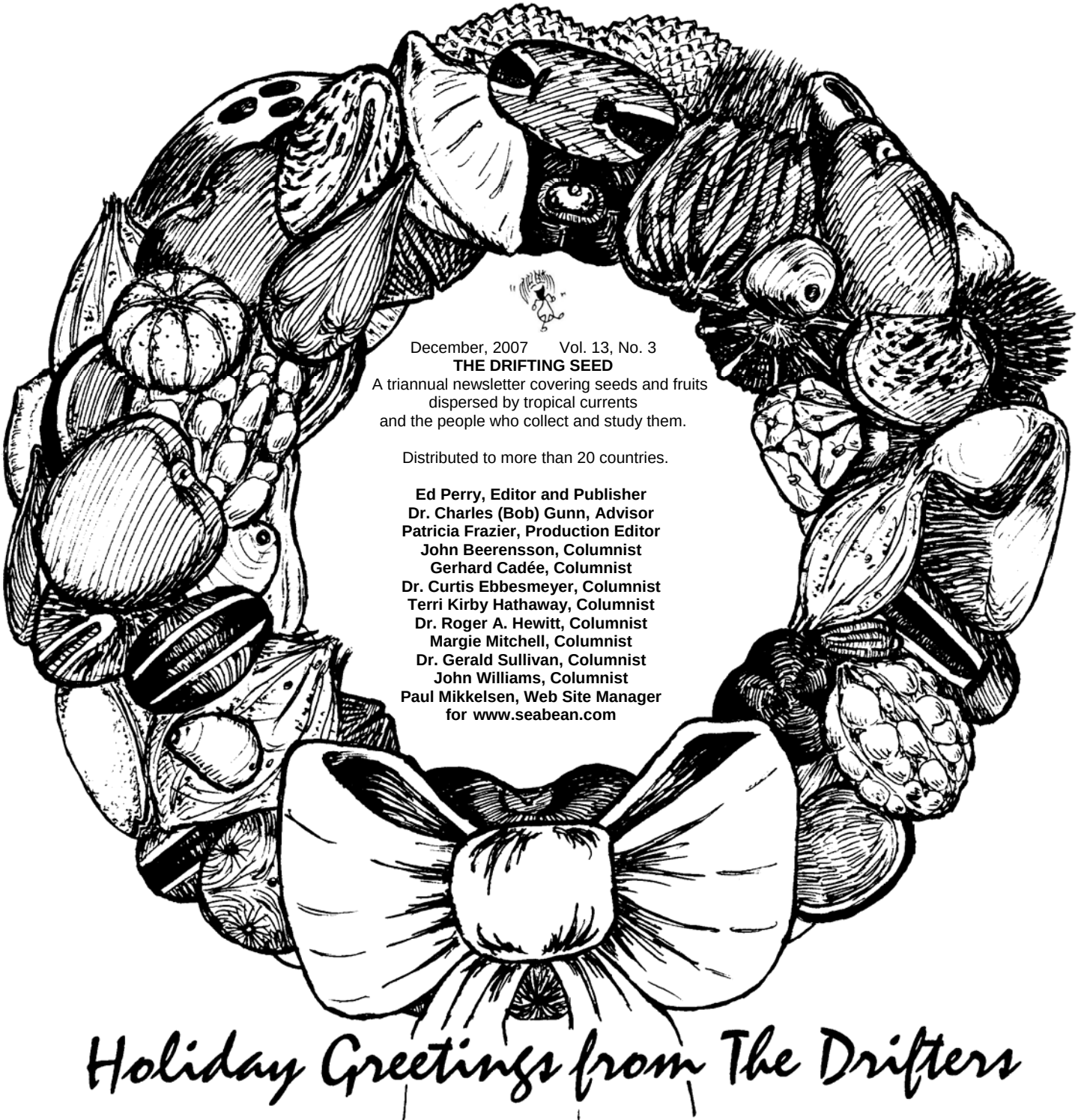

December, 2007 Vol. 13, No. 3

THE DRIFTING SEED

A triannual newsletter covering seeds and fruits
dispersed by tropical currents
and the people who collect and study them.

Distributed to more than 20 countries.

Holiday Greetings from The Drifters

The 13th Annual International Sea Bean Symposium will be held at the Cocoa Beach Public Library, October 18th-19th, 2008.

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or Seaheart88@aol.com (Ed Perry)

The Tale of the Numbered Sea Heart

by Terri Kirby Hathaway
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On a nice Saturday afternoon in September, Wendy Allen was walking along Debidue Beach, just north of Georgetown, South Carolina. It was around 4:30 pm, and Wendy was participating in Beach Sweep 2007, picking up trash, doing her part to clean her state's beaches.

Near the high tide line, she noticed what looked like a sea-bean, not a common beach find in her area. Sure enough, it was a sea-bean—a first for Wendy who had never before found a sea-bean on a South Carolina beach! She put it in her pocket and continued her hunt for litter.

When Wendy got home later that day, she remembered the sea-bean in her pocket. She took it out and gave it the once over. It was a sea heart—what a wonderful find! But when she looked more closely, she noticed that this sea heart had white spot and the number 2 near the hilum.

photos by Wendy Allen

Many questions tumbled around her head. What does this number mean? Is this a drift experiment? Who put this number on this particular sea heart? How did it end up on Debidue Beach?

Several suggestions have come from Ed Perry and Paul Mikkelsen. Ed mentioned that in the past, he has used White-Out® and a ball-point pen to number beans when someone has sent him a large number of beans to identify. Paul's idea was that this sea heart could have been one of several numbered for a drawing for door prizes or something similar.

So that's the story of the numbered sea heart. Now, what do the Drifters know about this? If anyone knows details about this particular sea heart, please drop me an email!

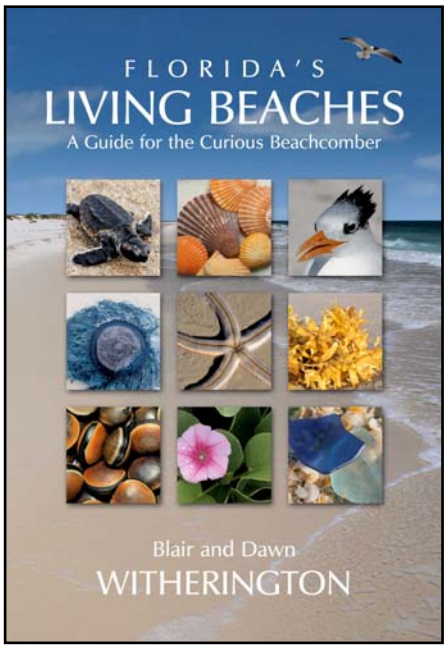
The Drifting Seed, December 2007

2007 Symposium Review

by Margie Mitchell
margiemitchell@cfl.rr.com

The Bean-O-Matic lives! Originally designed by Pete Zies in the distant past as a temporary novelty (using a pizza box and a pencil to hold it together), the Bean-O-Matic became a perennial favorite for symposium visitors with treasures to identify. Thousands of spins and countless re-gluings later, the Bean-O-Matic was still limping along in 2006, but clearly on its last legs, when Mike Burnett offered to give it a Texas-style refurbishing. Without compromising the matchless style of the original, Mike used beach-combed materials and some engineering ingenuity to restore it to its former glory, and then some! Many thanks to Mike for keeping a great symposium tradition alive. Beachcombers will be able to spin that wheel for many more years to come.

The centerpiece of the symposium this year was Dr. Blair and Dawn Witherington's amazing new book, *Florida's Living Beaches: A Guide for the Curious Beachcomber*. If you haven't yet had a chance to peruse this unbelievably comprehensive guide to absolutely everything that turns up on our shores, you owe it to yourself to find a copy. It's all in there, explained concisely and illustrated perfectly with detailed photographs—from the composition of the beach itself, to the creatures who live on and near the shoreline, to all manner of natural and manmade things which the curious beachcomber may see and wonder about. You will find something in this book that you didn't know about the beach before, no matter how experienced a beachcomber you may be. Guaranteed.



On Saturday evening, Blair took us on a beach quest. No, we never left the Cocoa Beach library, but we traveled all over the state of Florida, in every season, through different tidal cycles, in all kinds of weather, and on different parts of the beach, in search of whatever might call to us, from the valuable to the downright weird. In the spring we looked for nesting leatherback sea turtles, spirula, the burrowing four-o-clock, sharks' teeth, dueling hermit crabs, and the elusive junonia shell. In summer we found white beach tiger beetles, sea turtle hatchlings running for the ocean, manatees, sea glass, and the Perseid meteor showers. Autumn brought us not only sea-beans, but the fall mullet run, the giant land crab migration, tangle balls (aka whale burps), "stoned" crabs and stunning scenery at the Blowing Rocks Preserve on Jupiter Island. In winter we found blue animals (blue buttons, Portugese men-o-war, blue glaucus sea slugs, and by-the-wind sailors), *Janthina*, right whales, winged visitors, Sanibel shells, and the green flash. Want to go on your own quest for any of these things, or anything else for that matter? Get yourself a copy of the Witheringtons' book and hit the beach!

On Friday, we enjoyed Ed Perry's *Beginning Beachwalking* and Paul Mikkelsen's *Who Are the*

Drifters? Memories of our Founder Cathie Katz. Dr. Curt Ebbesmeyer also gave us his annual update on what's currently floating in the ocean, this year entitled, "Flotsam in Florida from Around the Gyre."

On Saturday Curt presented two sobering videos dealing with the frightening volume of plastic in the ocean. Curt's message to the beachcombers in attendance: "For every sea-bean you pick up on the beach, also pick up a bag of trash." He also brought with him a new book, aimed at the 10-to 14-year-old audience, in which he and his message are featured: *Tracking Trash—Flotsam, Jetsam, and the Science of Ocean Motion*, by Loree Griffin Burns. Check out this wonderful book for the younger beachcombers and budding oceanographers on your gift list.

Later on Saturday, Bill Blazek and Alice Lowe joined forces to present an excellent demonstration on polishing sea-beans, using two completely different approaches. Bill showed his peaceful, meditative hand-polishing-while-walking-the-beach method, while Alice shared her multiple-tumbler-keep-the-garage-humming-night-and-day methodology. Both produce spectacular results and drew a lot of audience questions. With all those new polishing converts, we can expect to see a lot of really shiny sea-beans at next year's symposium.

Exhibits this year included a mix of the old and the new. Alice Lowe set up a sea-bean polishing demonstration this year for the first time, including tumblers and a variety of beautiful items made from polished seeds. She stayed very busy all weekend answering questions and handing out free "Grow your own nickar tree" kits. It will be interesting to see if any of those people come back looking for her next year after they grow their own tree and discover its nasty temperament.

Another first-time exhibitor was Dr. Valeh Levy of New Smyrna Beach, Florida, who contributed a display about her award-winning school project at Coronado Beach Elementary School. Sixty students from grades Kindergarten through 5 participated in an in-depth "Seabean Experience," during which they engaged in a variety of activities, including studying sea-beans and ocean currents, analyzing sea-beans grossly and microscopically, planting ten species of sea-beans (sprouting one), decorating seahearts, and even tasting seaweed sushi.

Return exhibits included Cathie's sand box, which continues to fascinate visitors of all ages. Krieger Publishing displayed a nice variety of new and used nature books. Mike Stewart came all the way from West Virginia with his table full of beach curiosities he collected during his many years as a resident of the Space Coast. Nan Rhodes' fabulous seed jewelry and live mangroves were as popular as always. Jim Angy brought along his fabulous nature photography and his digital photo album series with Matt McQueen and Marge Bell, *Still Nature*, which now includes six CDs.

Bill Blazek's hand-polished sea-beans continue to amaze the crowd, especially those species, such as Jamaican naval spurge and sea coconuts that were long considered too delicate for successful polishing.

To complement Bill's display, Paul Mikkelsen and Mary Canada had a display of their own about hand

polishing and some specially-designed hand sanding kits, including all the right grades of sandpaper and some practice sea-beans. Paul and Mary also displayed a tremendous variety of other items, including a coco-de-mer, unusual seed pods, books, plants, and giveaway items, including seahearts and pumice.

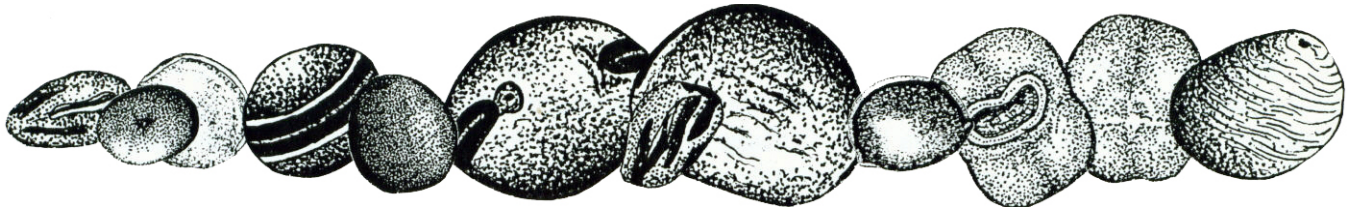
Curt Ebbesmeyer's table contained the usual weird assortment of man-made drift items—doll parts, sea pigs, light sticks, a lobster caller, glass floats, octopus traps, and quite a variety of Cuban household and medical waste which had been washing in locally this fall.

David Williams won the Bean-a-thon this year with 53 different species. Other winners were:
- Young Beaner: Emma Reinecke (age 7) with 18 species
- Cool Bean: Taylor Burford (rare *Dioclea*)
- Non-Bean: Caleb Wiggins (horse diuretic ampule)
- Grand Slam: Carol Agnew (and 40 species to boot!)

Odd Bean contest winners were:
- Smallest Hamburger: Paul Mikkelsen
- Heartiest Heart: Judith Nettles
- Plumpest Sea Purse: Bob Graham (Bob, if you're out there, please get in touch; your certificate and prize await).

Thanks to everyone who donated the wonderful collection of raffle prizes. Tickets sold well to help support publication of *The Drifting Seed* for another year, and all the winners were thrilled. Thanks also to everyone who helped with set-up and clean-up, worked the hospitality table, and pitched in with all the other minute-to-minute details of running a successful symposium. Special thanks to Nan Rhodes, who designed this year's "Surfing the Gyre" t-shirt.

This year's attendance broke all records. The presentations were so popular and the aisles were so crowded at times that we're planning a few adjustments to alleviate the congestion next year. Come out to the Cocoa Beach Library October 17-18, 2008, and see the new and improved Thirteenth Annual International Sea-Bean Symposium. We'll see you then!



I have been to most of the annual Symposiums. From sea beans, to coquina fossils, to flotsam and jetsam, it is all there. . . a beachcomber's paradise. There is some kind of magic in the air during these get-togethers. We have to be the most eclectic, eccentric, and diverse group of people imaginable. What a grand forum for knowledge and fun.
Barbara Rolph, Merritt Island, Florida

Rubber Ducky Frenzy

by Dr. Curtis Ebbesmeyer, curtisebbesmeyer@comcast.net

(**editor's note**: this story appeared in *The Wall Street Journal*, August 8, 2007; Page A13)

As if we didn't have enough real problems to worry about, an international media frenzy has erupted over a flotilla of "yellow rubber duckies" from the Pacific Ocean. The ducks are supposedly about to storm the beaches of the British Isles, 15 years after they spilled off a container ship 10,000 miles away. Reporters from Scotland, England, Germany, several other EU countries, Canada, Brazil, Australia, New Zealand, Japan and the U.S. have been emailing me urgent questions about the ducks: Have they been sighted in Britain yet? When will they land, and where?

I have been tracking these wayward bathtub toys for 15 years, with the help of an international network of dedicated beachcombers. We have collected data on these floaters -- where they beach, and when -- in order to better understand the oceans' currents: where they flow, how fast they flow, and how and when they interconnect.

Based on thousands of data points, I'm sorry to say I can't give the media scribes the story they want. And I'm sorry to have to give the good people of Britain and Ireland the disappointing news: There is no yellow rubber ducky flotilla approaching your shores.

First of all, let's get the facts straight. The 29,000 celebrated bathtub toys that fell into the Pacific in January 1992 aren't made of rubber, they're plastic. And they aren't all ducks. They came in four shapes: green frogs, true-blue turtles, red beavers, and yellow crouching ducks -- the latter two have by now been bleached white. Perhaps a hundred of them have made it to the North Atlantic and are now scattered across its vast expanse.

We know they can travel that far -- in 2003, one duck washed up on the Maine coast and a green frog was found on the coast of Scotland.

Their 11-year journey began in the central Pacific, about where the International Date Line crosses the 45th parallel. They proceeded eastward to southeast Alaska, where beachcombers recovered thousands of their fellows. From there, the two toys drifted north to the Bering Sea, across the North Pole, south along eastern Greenland, and further south to Newfoundland, where their paths diverged -- one to Maine and the other to Britain.

To complete these journeys, they had to ride

four circular oceanic currents called "gyres" or "carousels of the seas." To understand these gyres, we have also tracked 80,000 Nike shoes lost in another North Pacific cargo spill (each one bearing a code for the container from which it spilled), 34,000 spilled hockey gloves, five million Lego pieces lost off England's Land's End and Japanese survey stakes that typhoons have washed out into the Pacific. Not to mention fishing boats, aircraft parts, bowling balls, lobster-pot tags, toy tops, piggy banks and myriad other objects likewise lost at sea -- and, of course, messages in bottles. Every item that makes it to shore has a story to tell and data to impart.

By roaming the world's beaches and seeing what washes up, we have also learned that there is far too much man-made stuff floating on the seas, especially stuff made out of plastic -- now found in eight vast oceanic garbage patches. Most of it does not biodegrade. It just breaks down into ever smaller pieces, to the size of confetti and, finally, dust. Fish, birds and other marine animals eat this pseudo-plankton and pass it up the food chain. Our world-wide litter is poisoning the seas, the creatures within them, and ultimately, ourselves.

Furthermore, we are only now discovering how susceptible these currents are to changing airflows, rising ocean temperatures and growing river inputs as the world warms and glaciers melt. I hope the intense and widespread interest in the tub toys' journeys will yield greater concern for our oceans.

These humble toys have piqued curiosity and stimulated imaginations around the world, but they can also yield important scientific data. If you spot one of the bathtub toys, please take a picture, look for the words "The First Years" imprinted on each toy (see photos at www.beachcombers.org), and send a note to curtisebbesmeyer@comcast.net. You might also consider joining the beachcombers who patrol and clean our shorelines. You can help us better understand and protect our magical but fragile oceans and their powerful, circulating currents.

Pictured are Dr. Curtis Ebbesmeyer (left) and James Ingraham, who together have been tracking the journeys of these wayward bathtub toys. Photo by Dave Ingraham.

The Drifting Seed, December 2007

The Brain Bean

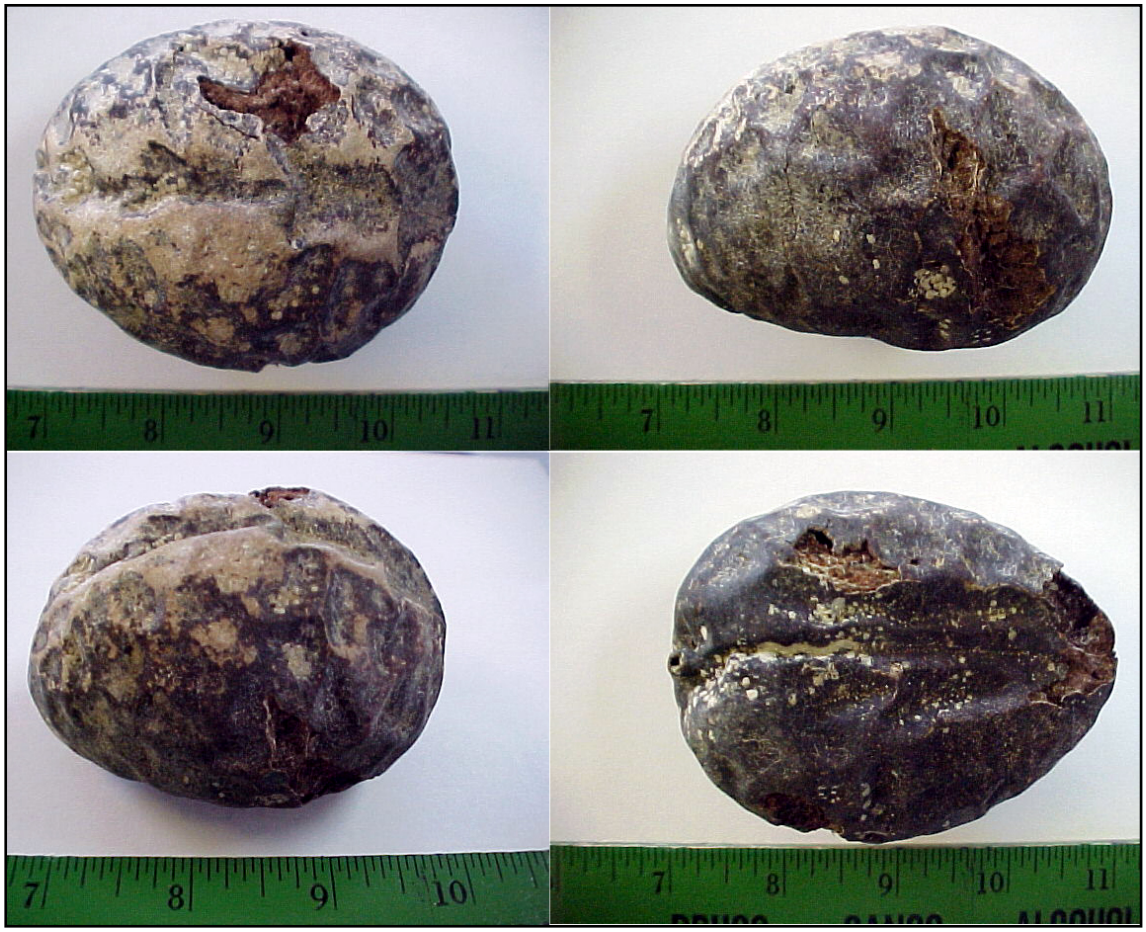
by John Beerensson, Merritt Island, Florida
beerensson@bellsouth.net

The brain bean (*Andira galeottiana)* is a rare find on Florida east coast beaches. Gulf coast beaches are better hunting grounds, but even there it is still a rare find. When one comes upon this bizarre sea-bean, there is much joy - equal to finding a Spanish gold doubloon. Well, maybe not that much joy.

It looks like a brain. It really does. Is it another example of Mother Nature using an animal kingdom design and putting it in the plant kingdom; just like with the black sea-biscuit (*Poupartia amazonica)*!

The brain bean I found after Hurricane Jeanne in 2004 was perfect. No missing parts. A perfect right lobe and a perfect left lobe. Being a scientist at heart, I hooked up electrodes to the right lobe, turned on my computer, but, alas, no art nor musical images appeared. Not ready to give up, I then hooked up the left lobe. But, alas again, no images of numbers nor algebraic equations appeared. My beach brain must have a very, very low IQ. Or maybe my mad scientist software wasn't working right.

Some future thinking evolutionary biologists feel that after we humans become extinct on this planet in the next eon or two, the cephalopods will come to rule the world. Maybe, just maybe, they are wrong and it will be *Andira galeottiana* that will rule. Why would Mother Nature put the brain design in the plant kingdom if she didn't have purpose?!



One final thought for devoted sea-beaners. When displaying the brain bean, I recommend a nice glass container. Around the brain should be nickernuts. That way you can show your friends your brain that is surrounded by . . . ta dah . . . gray matter.

The brain is the citadel of sense perception.
Pliny the Elder

The Brown Coralbean
A.K.A. The What?, Where?, Did I Miss It? Bean

by John Beerensson, Merritt Island, Florida
beerensson@bellsouth.net

Coralbeans are supposed to be somewhat rare on Florida's east coast beaches. Especially the ones that are not brown. In over a decade of collecting I have found only five red to red-orange corals, three purples, one speckled mauve, one caramel, and one yellow coral. As for the brown corals . . . ta dah . . . 332 to date. For a "rarity," that's a lot of beans.

Let me digress for a moment and tell you about one of the purple corals. When found, it was a bright orange, and at 9 mm, much smaller than the other two purple corals. It changed color after a few months . . . a crushing blow since the bright orange stood out so nicely and received at lot of "oohs" and "aahs" from my fellow beaners. Sigh.

Ed Perry and Wayne Armstrong wrote about coralbeans in the May 2001 issue of *The Drifting Seed* (Vol. 7, No. 1). These articles are must-reads for beachcombers and sea-beaners.

Back to the brown corals. They're sort of barrel shaped and come in different shades of brown; from yellow-brown to red-brown to very dark brown, almost black. They average about 14 mm, with some being a little larger, and some being a little smaller.

Some of the browns are speckled. A fellow beaner asked me how many of the speckled variety I have found. So I counted them. Of my 332 total, 33 are speckled. Roughly 10%. Not that this has any scientific meaning because of my limited sample size, but an interesting observation for those who are obsessed with brown corals. For those of you going for a PhD in brown coralbeans, maybe I have been of service. Maybe not.

Let me address the beaners who overlook this little gem. I have beachcombed with a number of people over the years, and with few exceptions, they walk right past this bean. What? Where? Did I miss it? My response usually is . . ."yeah, it's under your left toe." Or maybe it's under their right knee if we drank too much the night before. You get my drift.

The coralbeans are there, especially after a passing tropical storm or hurricane. However, please don't grab the brightly colored ones—the reds, oranges, purples, yellows, caramels, mauves, and lime greens. They're mine. Whoa! . . . did I say lime green?? Perhaps I'll write about my fantasies in a future article. Want to hear about me sea-beaning with Angelina Jolie??

He who laughs, lasts.
Anonymous quote

Unidentified fruits from the Dutch coast. Who can help?

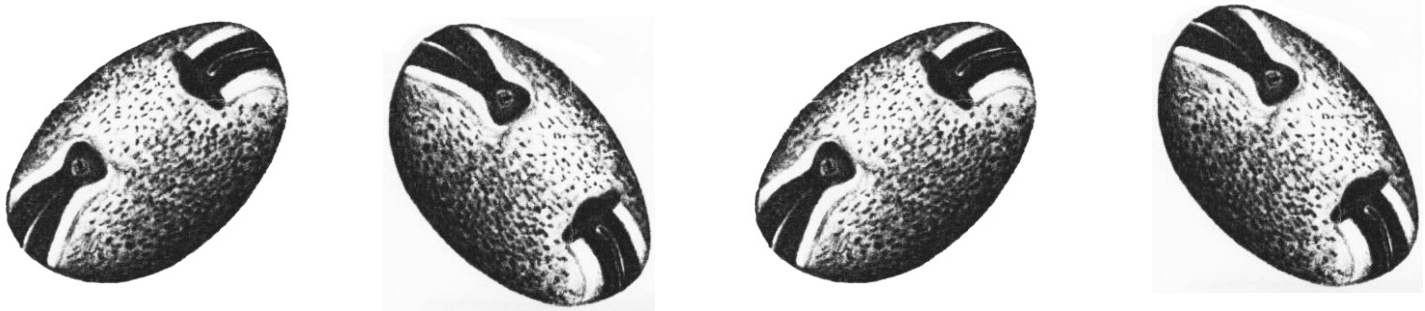
by Gerhard C. Cadée (cadee@nioz.nl)

The publication of our booklet on tropical drift-seeds from the Dutch coast (Brochard & Cadée, 2005. *Tropische drijfzaden van de Nederlandse kust*, Tabellenserie SWG) has encouraged more people to look for them on Dutch beaches. As a result in particular 2007 has been 'fruitful'. Real drift seeds such as sea-hearts and sea-beans give little problems for identification. The Dutch beaches receive, however, also many fruits and seeds that are for different reasons imported by man and that are not real drifters. These are more difficult to identify with the existing literature on drift-seeds and –fruits.

Wim Kruiswijk found two still unidentified very flat pods of what might be a tree belonging to the Fabaceae, one on the beach of Zandvoort, where he lives, the other on the island of Texel. Probably we have to try to open the pod carefully to look for the seed inside. On the 26th of September Wim Kruiswijk found another curious fruit again on Texel and a few days later Folkert Janssens e-mailed me a picture of exactly the same fruit, which was found the 3rd of October on another of the Frisian islands: Vlieland.

If anyone can help us to identify these we would be very glad. I will send a copy of the booklet mentioned to the first who helps to solve one of our problems.

editor's note: Gerhard mentioned that if anyone can identify these two mystery driftseeds he will express his gratitude by sending them a free copy of he and Brochard's publication about the driftseeds of the Dutch coast.



Wracky Potpourri II

By John Williams and Gerald Sullivan
williams@utmsi.utexas.edu, geraldsully@yahoo.com

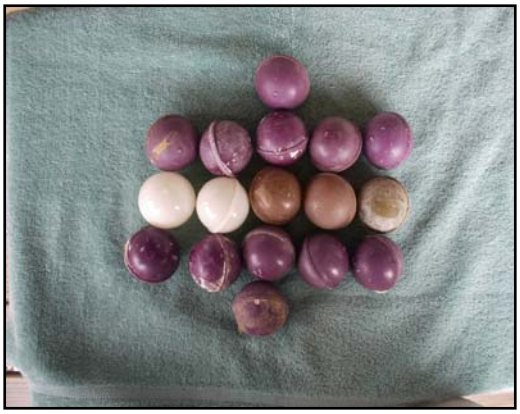
(**editor's note**: This is the second half of a 5-section article;
The first half appeared in the December 2006 issue of this newsletter.)

The Purple Pill

The first seven plastic floating spheres found were purple in color. When the first one was spotted, my brain registered Nexium. If you view television for a moment or two, you will be brainwashed with advertisements for "Nexium, the Purple Pill" for heartburn, acid reflux etc.

At least 29 individual spheres in colors of purple, brown, olive and white have reached shore. They are identical in size (2 inches in diameter and 6 inches in circumference) and composed of a durable, lightweight, hard plastic with varying amounts of a white caulking-like substance adhering to them.

It was early speculated that these buoyant aqua spheres were part of some sort of floatation entity. They could possibly be component parts to a submerged platform suspended at a specific depth for oceanographic scientific instruments. This supposition was more or less substantiated later by the arrival of a huge mass of white caulking-like substance with in excess of 300 spheres embedded in it.



"Ol'-yeller" Sea Rings

No one seems to know the identity of these yellow rope sea rings. The butcher, the baker, the candlestick maker, plus shrimp boat captains, bait house operators, rod and reel shop owner, hardware personnel, etc. have all been consulted. Nada!

These fibrous, yellow rope rings varied from 9 inches to 3 inches in diameter and one-half inch thick. Apparently some have not been at sea very long since their color retention is excellent and they exhibit no adhering marine organisms, whereas others have lost their yellow color. These are not designed for strength, since the connecting

"weld" is easily disengaged. Pulled apart yellow ropes are as prevalent as the intact ones.

Two separate and independent reports have just arrived and they are identical as to the role of the yellow rings. The rings are used in conjunction with the transportation of varying diameter oil pipes used on oil rigs in the Gulf. Apparently they are used as internal "sleeves" to prevent the locking of the pipe threads between two segments of pipe. The pipes are disengaged on the rig platform prior to their final installation and the released sleeves may accidentally be discharged into the Gulf.

You can bank on it!

Finally a bear piggybank! No clue as to its origin. The accompanying plastic piggy is not a bank. Both are recent arrivals and were seriously wounded by multiple turtle bites.

News and Notes

Dr. Mary Chavez, a professor from the new Irma Rangle School of Pharmacy in Kingsville, Texas, enjoyed the luck of the novice drifter with the outstanding find of a true-blue piggy bank. Scrupulous examination of the prized swine with a powerful magnifying glass failed to yield a clue to its origin or manufacturer. The blue colored plastic hog stands 2 inches tall, 2 inches wide at the pork belly and 3 ½ inches from snout to tail. Please note the 3 turtle bites close to the baby back ribs. This constitutes the second reported animal bank found on a Mustang Island beach. The other was a yellow cubby bear bank found by Seabeader Sully..

More on "sea pigs" from Drifter Billi Wagner in Vero Beach, Florida (Cassowary@bellsouth.net): "I found this in the last big-seas wrack in October. The slit is not slit open, so it isn't a great piggybank. Do you recognize this one? It has a lot of ectoproct on it."

The First *Cassia fistula* L. from the Netherlands

by Gerhard C. Cadée, René Cappers & Johan van Gent

On the 24th of March 2007, Johan van Gent collected a 24 cm long and 1.5 cm thick cylindrical somewhat damaged fruit on the Dutch North Sea coast near Ouddorp (Fig. 1). René Cappers recognized this as a pod from the golden shower or pudding-pipe tree *Cassia fistula.* There were still some seeds inside the pod. It compares very well with the description and pictures given in Gunn & Dennis (1976) and Perry & Dennis (2004). However, it is a small specimen: the length given in the literature ranges from 25-60 cm.

Fig. 1

The earliest European records of *Cassia fistula* in drift were from the Norwegian coast (Strøm, 1762, repeated by Gunnerus, 1765, see translation by Gunn, 1999, in particular part 3) and also mentioned by Guppy (1917). Since Gunn & Dennis (1976), these Norwegian *Cassia fistula* fruits are no longer considered to have drifted to Norway over a long distance from Florida, or even from farther away. Gunn & Dennis (1976) consider them to be beached as the result of shipping accidents. They give three reasons for their conclusion. 1). *C. fistula* is not recorded from Atlantic European coasts that receive Gulf Stream drift. 2) Even on Florida beaches they are rare in drift (this is confirmed by Perry & Dennis, 2004). 3) The fruits were commerce during the 17th and 18th century, they were used to prepare a laxative. Also the one specimen collected by Martins in 1857 from a Mediterranean beach (Montpellier, France) they consider to be either from North Africa or from the nearby harbor of Marseille. Nelson (2000) reports only one other west-European specimen, collected in 1932 from eastern England (Sussex), and none from the Atlantic Ocean coasts.

Following Gunn & Dennis (1976) and Nelson (2000), we do not accept our Dutch record as real tropical drift. The Dutch coast receives much more man-imported tropical drift fruits and seeds than genuine 'peregrine' tropical drift (Cadée, 1997; Brochard & Cadée, 2005). This record more probably indicates that fruits of *C. fistula* are still commerce. The fruits indeed are still imported for the preparation of a laxative, and sold as 'manna' in Germany and 'pijpkassia' in the Netherlands, according to information from the Internet (Indische gouden regen-Wikipedia). In 2005 they were also sold together, with other decorative seeds, fruits and tropical shells, in the shop of the "Hortus" Botanical Garden in Amsterdam.

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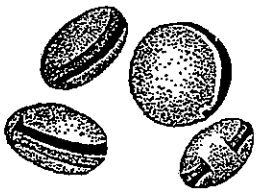
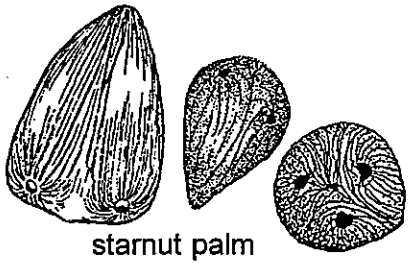
Simple Guide to Common Drift Seeds

(Illustrations by Cathie Katz and Pamela J. Paradine)

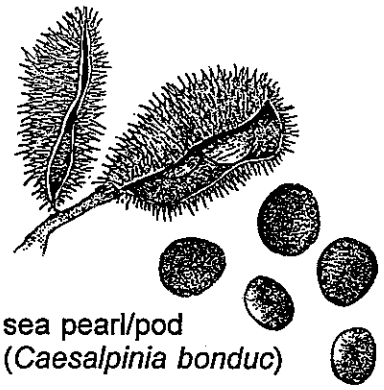


hamburger bean
(*Mucuna* spp.)

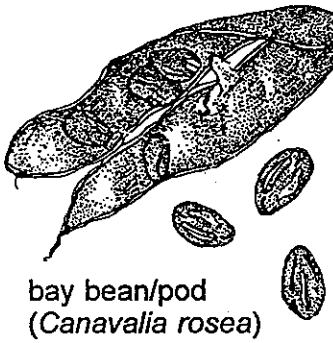


starnut palm
(*Astrocaryum* spp.)

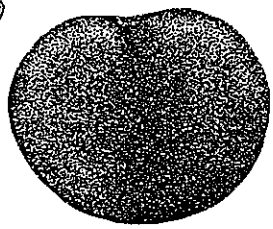
country almond
(*Terminalia catappa*)



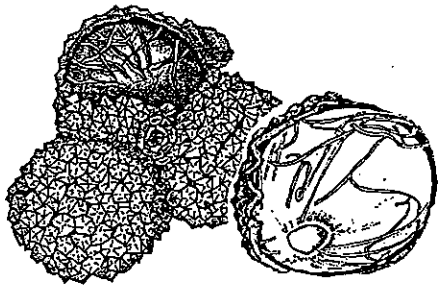
sea pearl/pod
(*Caesalpinia bonduc*)



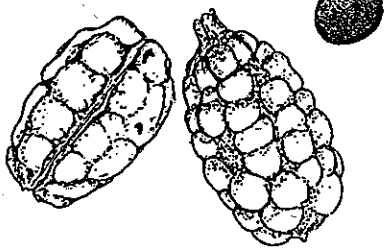
bay bean/pod
(*Canavalia rosea*)



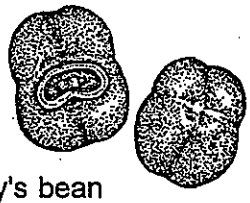
sea heart
(*Entada gigas*)



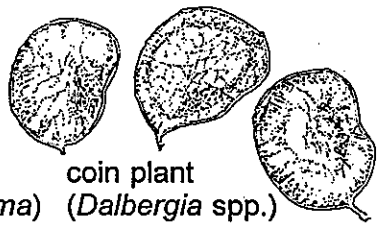
golfball/pod
(*Manicaria saccifera*)



hand grenade
(*Sacoglottis amazonica*)

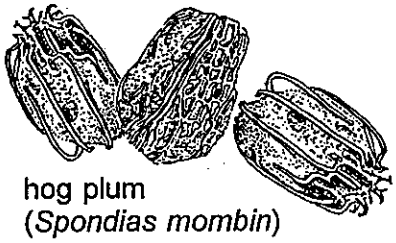


Mary's bean
(*Merremia discoidesperma*)

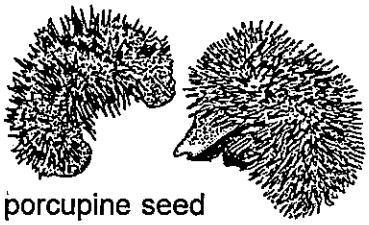


coin plant
(*Dalbergia* spp.)

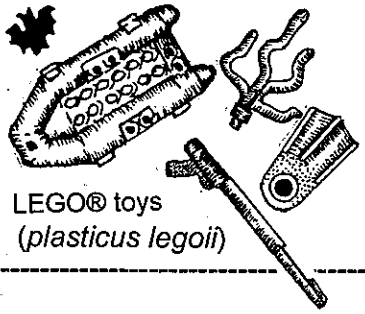
sea purse
(*Dioclea reflexa*)



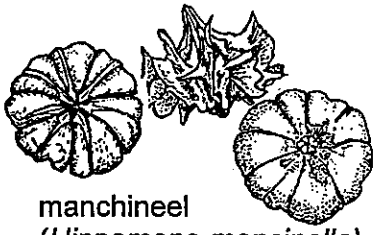
hog plum
(*Spondias mombin*)



porcupine seed
(*Caryocar microcarpum*)



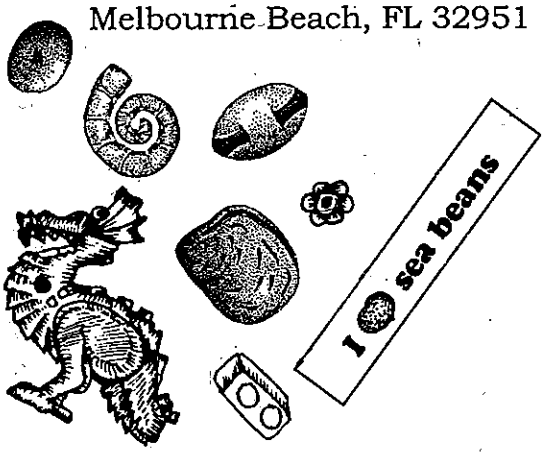
LEGO® toys
(*plasticus legoii*)



manchineel
(*Hippomane mancinella*)

white/black/red mangrove
(various genera)

The Drifting Seed
PO Box 510366
Melbourne Beach, FL 32951



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