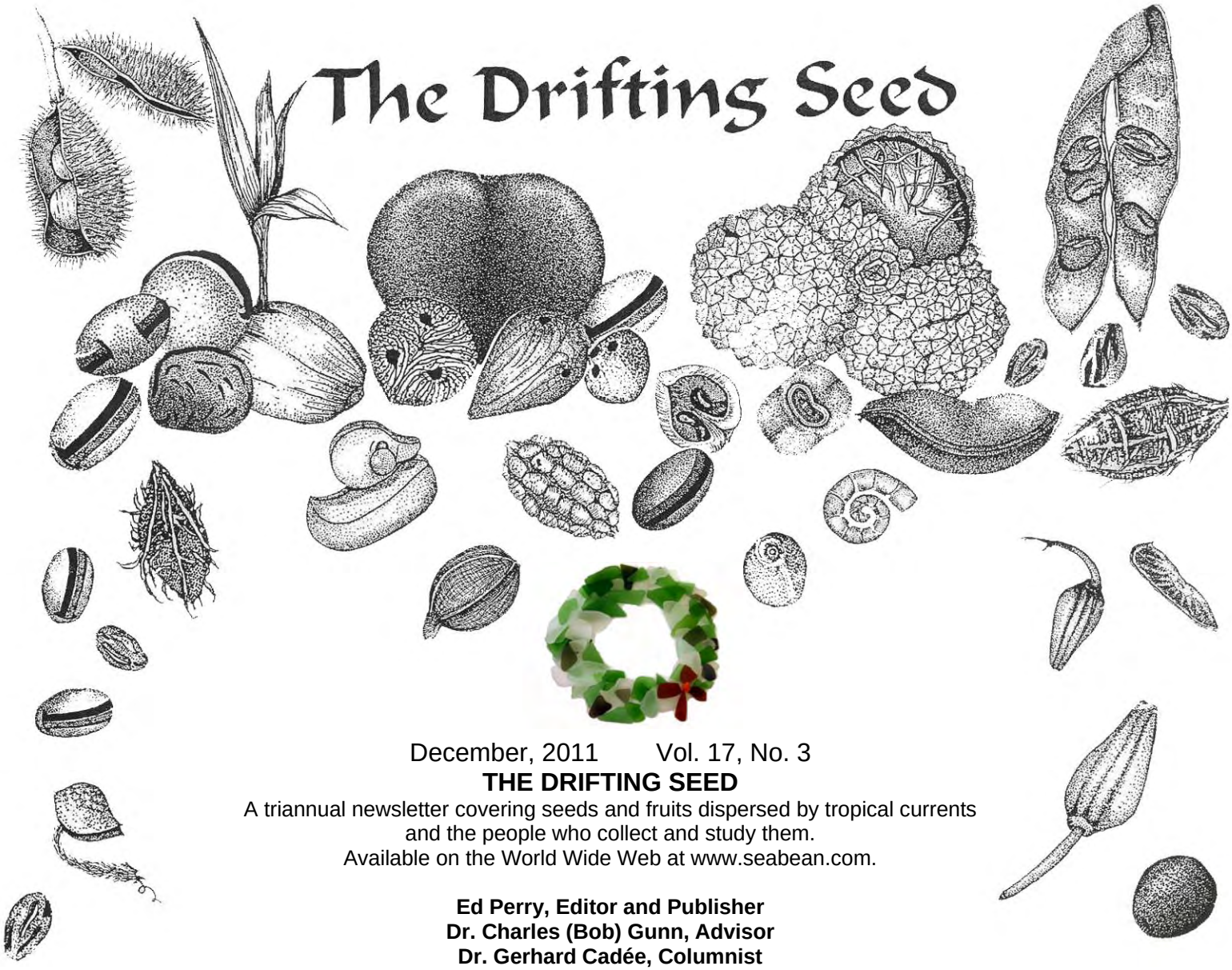
The Drifting Seed



December, 2011 Vol. 17, No. 3

THE DRIFTING SEED

A triannual newsletter covering seeds and fruits dispersed by tropical currents
and the people who collect and study them.
Available on the World Wide Web at www.seabean.com.

The 17th Annual International Sea Bean Symposium will be held at the Cocoa Beach Public Library, October 12th and 13th, 2012.

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1770 Mason Terrace, Melbourne, FL 32935, USA
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Sixteenth Annual International Sea-bean Symposium

Cocoa Beach, Florida, October 21 and 22, 2011

by Margie Mitchell, margiemitchell@cfl.rr.com

I had no idea how much I wanted to visit the beaches of Georgia and the Carolinas. No idea, that is, until this year's symposium's keynote speaker, Dr. Blair Witherington, took us on a trip up the coast from the Florida border all the way to the Outer Banks of North Carolina. Who knew there were so many fascinating beaches along the way?

On Cumberland Island, Georgia, we toughened up our feet on the oyster shell mounds, and encountered wild horses and horseshoe crabs. On Jekyll Island we marveled at the "driftwood forest" and archaeological shipwrecks. Stopping at St. Simons Island, we found hundreds of acres to beachcomb at low tide, and watched the sand dollars and shells creep along in the mud.

Reaching South Carolina, we combed the tide pools at Hunting Island State Park and were amazed at the wealth of shells at Botany Bay, where beachcombers are not permitted to take them away. We nearly got lost in the vast salt marshes of the Cape Romain National Wildlife Refuge, and discovered the highest sea turtle nesting density north of Cape Canaveral at Cape Island. At Huntington Beach State Park, we saw American minks in the wild.

As we crossed into North Carolina, we left a note and some souvenirs for other curious beachcombers at the Kindred Spirit mailbox on the state line. We took a ferry to Bald Head Island and tooled around in a golf cart, the only vehicles allowed. We went fossil hunting at Fort Fisher and shelling at Masonboro. At Topsail Beach we found oyster shells up to two feet long! Eventually we worked our way north to the Outer Banks, passing the famous lighthouse at Cape Hatteras, and stopping to visit the beachcombing museum at Nags Head. After passing the wild and beautiful beach at Corolla, we were stopped in our tracks by the barricade at the Virginia state line (not that we weren't welcome there, but the cars that race up and down the beach on the North Carolina side are not!). Maybe we'll get to Virginia on our next trip with the Witheringtons.

If you want to find out more, Blair and Dawn have done a fabulous book on the subject. Get yourself a copy of *Living Beaches of Georgia and the Carolinas*, and hit the road. Wonders await.

Our other speakers this year included some old favorites and some new subjects:

- "Dr. Beachcomb" Deacon Ritterbush returned for the second year and gave two presentations. "The Context of Beachcoming" helped us understand what is likely to turn up on any given beach, based on its history, location, and composition. "Everything You've Always Wanted to Know About Sea Glass" taught us about the sources, genres, and colors of sea glass, as well as what types of glass are likely to turn up on different beaches.

- Dr. Curtis Ebbesmeyer's "Wall Across the Atlantic and Tsunami Debris" took on immediate relevance when a large patch of Japanese tsunami debris was spotted near Midway Island during the symposium. The debris is now heading for Hawaii, and ultimately the US West Coast, exactly in keeping with Curt's predictions.

- Ann and Dan Sherwood shared their adventures traveling the world collecting glass fishing floats with, "Eyes of the Ocean, Glass Fishing Floats: Their History, Use, and Beauty."

- David McRee returned with his updated, "I Think It's a Jellyfish," giving us many facts and images of these beautiful, but sometimes dangerous, creatures.

We had some interesting new exhibits this year, along with several perennial favorites:

- Along with her usual sea-bean polishing demonstration and eclectic table display, Alice Lowe created a new display board with 28 common sea-beans cut in half, for the curious to examine the beans' anatomy without having to slice up their own collections.

- Suzy and George Pappas of the Coastal Cleanup Corporation joined us for the first time this year, with a thought-provoking display on the subject of marine debris on our coastline. Included was a contest to guess the number of plastic bottlecaps in a jar, all of which were collected during a two-hour beach clean-up in South Florida. The somewhat depressing answer was 414.

- The Sherwoods overwhelmed us with a stunning display of their fishing float collection. Ann said that they would have brought more if there had been space!

- Others exhibits included Krieger Publications' books; Dr. Beachcomb's books and sea glass; Blair & Dawn Witherington's books, art, and beach treasures; Jim Angy and Matt McQueen's photography; Curt Ebbesmeyer's trash (including everything from "sea pigs" to Christmas decorations), Nan Rhodes' exotic jewelry; Bill Blazek's amazing hand polished beans (now including polished golfballs still grouped together in their husk!).

Mother Nature sent us a good selection of sea-beans shortly before the symposium so that Bean-a-thon participants would have some good finds. This year's winners were:

- Most species: Carol Agnew, 38
- Young Beaner: Emily Hamilton, Age 10, 26 species
- Cool Bean: Sharon Cranston, Nypa Palm
- Non-Bean; Sarah Falkowski, Invisalign dental braces

Odd Bean Contest winners were:

- Squarest Seaheart: Margaret Anderson
- Largest Hamburger: Donna Moore
- Largest Nickarnut: Bill Blazek

Special Bean Awards went to Terri Kirby Hathaway, JoAnne Powell, and Mary Bowman for all their help making the symposium run smoothly, and to Dawn Witherington for the very cool t-shirt design.

Thanks also to all the volunteers who worked at the hospitality table and behind the scenes; to the library staff who always do more to support the symposium than anyone realizes; and special thanks to Brenda Spletter, Alice Johnson, and Marge Bell for keeping us all fed and watered.

The Karma Award goes to Barb Venuto, who made a generous donation to the Drifters a few weeks before the symposium, and then walked away with two raffle prizes on Saturday night!

We're already planning for next year's symposium. Join us next October in Cocoa Beach!

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editor's note: Shown below is a glass (fishing) float found by beachcomber John Beerensson (beerensson@bellsouth.net) shortly after this year's Sea-Bean Symposium and Beachcombers' Festival in Cocoa Beach, Florida. Glass floats are very uncommon on Florida east coast beaches and this find was a first for comber John. Maybe it was Ann and Dan Sherwood's display at the Symposium that inspired John to go find this treasure; maybe it was luck? No doubt, it was a gift from the sea!

What a Life!!, Part 2

by Gerald Sullivan
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What a Life!!, Part 1 appeared in the previous issue of the Newsletter, and featured the Kokonut Klowns, Professor and Friends, Gordy, Dolphins on a Roll, Sea Wax, Duh- a Wind Chime Failure, Clackers, Mary's Bean and Ibisu as examples of seabean utilization. Part 2 continues this same theme as follows:

10. *Mangifera indica*–Mr. Moe Mango and his curious friend puzzle over a newly arrived strange looking tropical drift seed.

11. Awaiting conversion to the lovable hard-beaked turtle of the sea. These humongous seeds, aka Donovan's brain, are scarce on the Atlantic coast, but abundant on Gulf shores in Texas. Also pictured are two finished products composed of *Andira galeottiana, Astrocaryum* spp. (starnut palm) and *Acrocomia* spp. (prickly palm).

12. Xmas Tree Ornaments–Give it a try. Use your imagination.

13. Refrigerator Art–What an angle! See photo. If you happened to have missed this award winning article, please check out the newsletter Sept., 2010, page 6.

14. Necklaces–My finest was inspired by a very expensive Kauaian necklace composed of multi-strands of Job's tears (*Coix lacryma-jobi*). Be sure to check out the coordinated trio of glass beads between each tear. In order to keep the record straight, those seeds incorporated into the necklace, were harvested from terrestrial plants in Kauai. Seldom was a Job's tear washed ashore and most of those had been seriously ravaged by the sea. Most of my other necklaces were of simplistic design and distributed freely among friends, relatives and strangers. How many? Possibly a hundred or more. My wife Carol requested that her favorite eye-glass holder also be exhibited since it is composed of a string of lovely, light weight, gleaming Job's tears with eye-glass-holder accessories.

15. Kid's Toy–From the seed pod of the African tulip tree (*Spathodea companulata*) a Polynesian outrigger can be easily and quickly assembled. Please take note of the natural quilted floor mat also furnished by the half-pod for extra comfort for the voyager.

16. Kauaian Legend–On this Hawaiian island the beaches are patrolled by the Lu'n'a (which means overseer) for the sole purpose of preventing land crab mating in the dark of the New Moon, thereby hampering proliferation and world domination. See pictures. During the rest of the month they blend in nicely with the unbelievable number of fallen and washed up tropical almonds strewn on the sandy beaches and go unnoticed. So watch your step.

17. La Mirage–A Mustang Isle Oasis. A bit of paradise on sargassum beach accompanied by background music with Danny Kaye's rendition of the early 1950's tune, "I've got a lovely bunch of coconuts." Whether you are familiar or not, for a nostalgic moment, dial up google.com–"I've got a lovely bunch of coconuts."

18. The happy clams with the smiling *Diocleas** clamor, "That's All Folks!"

*Not fair! You've already convinced us that *Diocleas* don't have a smiley, only *Mucunas.* Refer to newsletter May, 2008 for an explanation.

Happy Holidays From The Drifters

This beautiful seaglass wreath was fashioned by Melbourne Beach Drifter Michele Kelley.

An Immature Coconut from the Dutch Coast

Gerhard C. Cadée & Michel Rühland
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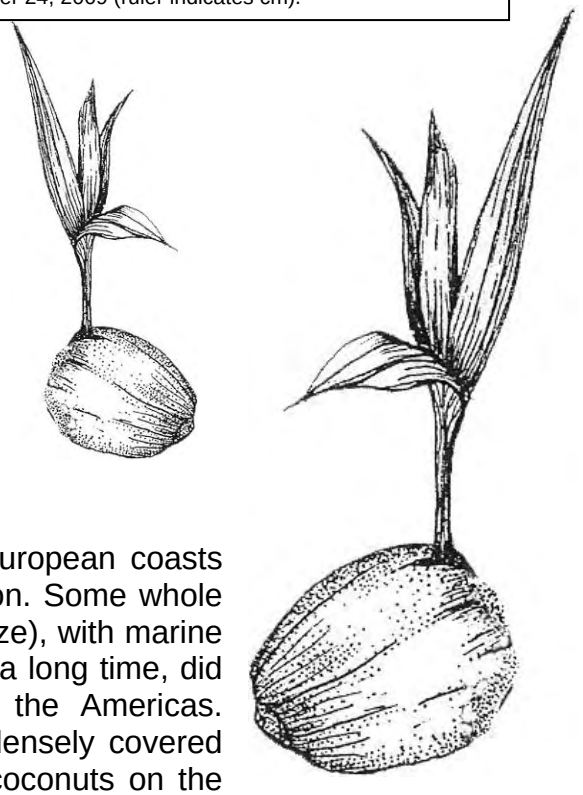
On the 24th of November 2009 Michel collected an immature coconut on the North Sea beach of Castricum (The Netherlands) (Fig. 1). For those who collect drift seeds on tropical beaches where coconut palms grow such immature fruits are well known (Fig. 2). But how did this small coconut arrive on the Dutch coast? Are they also able to float long distances?

Gunn & Dennis (1976: p.185) picture a couple of immature (juvenile) coconuts. On account of an immature specimen 5 cm across Perry & Dennis (2003: p. 93) write: "small ones like this make good conversation pieces. Few would guess that they are coconuts."

Fig. 1 An immature coconut collected by Michel Rühland on the North Sea beach of Castricum (NL), November 24, 2009 (ruler indicates cm).

Fig. 2 Immature coconuts collected by Gerhard Cadée on the beach of Nuhu Jaan, Kai Islands, Indonesia in 1985.



Mature coconuts on European coast

Nelson (2000) writes that the claim of intact coconuts on European coasts being true long-distance drifters has to be treated with caution. Some whole fruits, particularly small ones (smaller than the commercial size), with marine barnacles and shipworms indicating they had been afloat for a long time, did come via the Gulf Stream and North Atlantic Drift from the Americas. Brochard & Cadée (2005) had not seen Dutch specimens densely covered with barnacles and shipworms. So they concluded that all coconuts on the Dutch coast were refuse.

Harries & Baker (2005) estimate that a full-grown coconut might cross the Atlantic Ocean in 6 months, and might even been viable on reaching the European coast. A viability test would indicate whether these coconuts really had crossed the Atlantic. On base of drift-bottle experiments Guppy (1917), however, concludes that on average tropical drift-seeds take 14 months to cross the Atlantic. After such a long time coconuts will have lost their viability. See Cadée (2008) for more comments on the 'Harries-Baker test.'

Immature coconuts

Up to 2009 we had not seen immature coconuts from the Dutch coast. The specimen from Castricum, 7 cm long, is the first. There are no barnacles on or boring shipworms in this coconut. So also this small one is most probably refuse. This conclusion is corroborated by the finding of immature coconuts in a shop in the Netherlands, where it was used as decoration material. The immature ones apparently are also imported in Europe. This once more indicates the important role played by man in the transport of tropical seeds and fruits to the Dutch beaches (Cadée, 1997).

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Drifter Jane Darke's display cabinet (of beach finds) in
Kensington Palace, London, part of the Enchanted Palace Display (running through Jan. 2nd, 2012).

Looking for Driftseeds on the Island of Molokai, Hawaii

by Liliane Hosten and Paul Hosten
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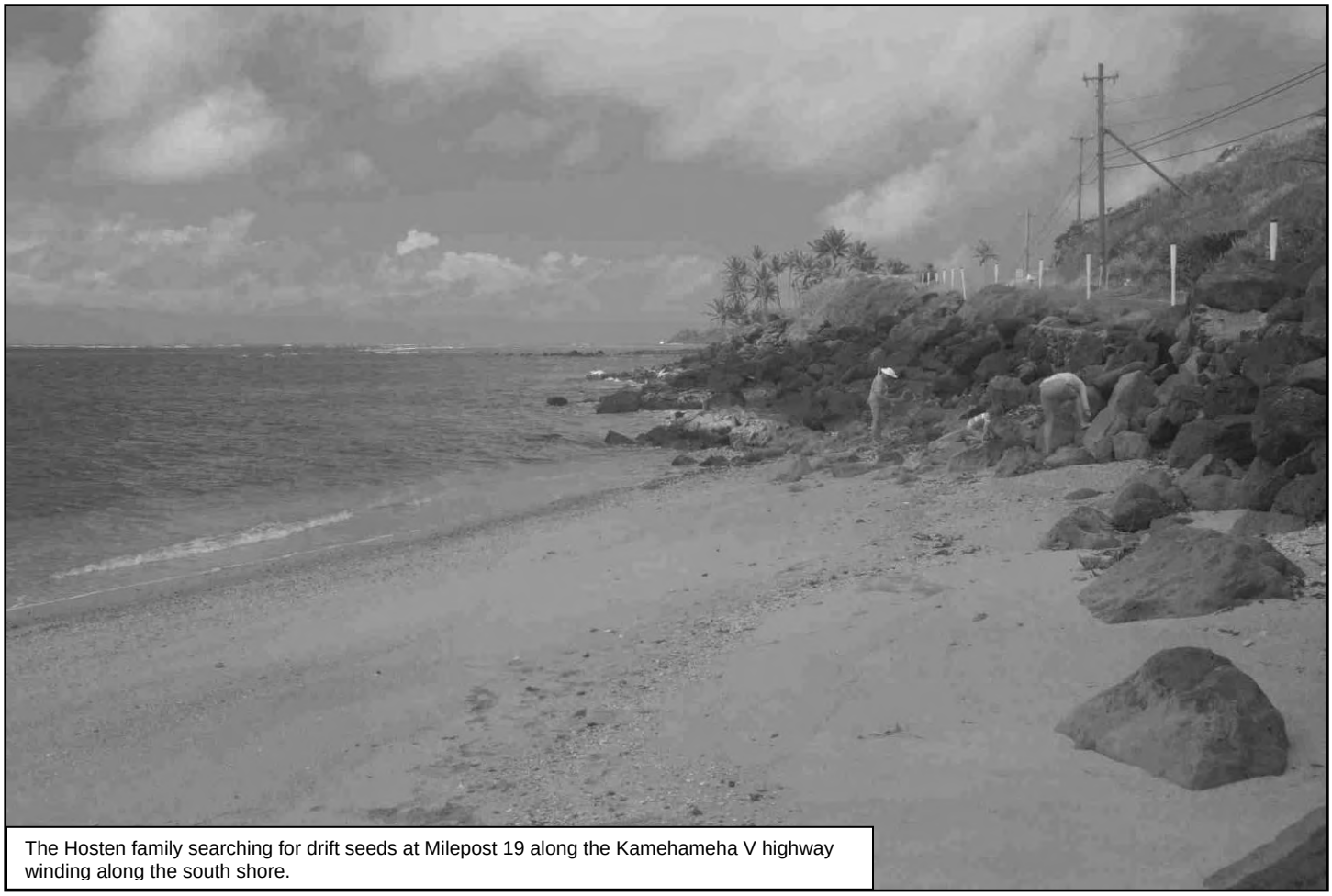
It is an absolute pleasure to go searching for driftseeds on the island of Molokai. The only daily problem is the choice of which beach to visit. One fringed by coconut palms, perhaps by exuberant coastal tropical vegetation, or scattered with black volcanic rocks? The translucent waters appear light blue near the beach, darker beyond the fringe of the reefs, and have the perfect temperature for a swim. The islands of Maui and Lanai hang mysteriously under white caps of cloud in the distance.

Volunteers searching the drift for seeds north of the Kalaupapa lighthouse (Hoolehua beach) with the Molokai north shore cliffs in the background.

Molokai is the fifth largest island of the Hawaiian archipelago, approximately 50 km long and at most 15 km wide. The diversity of climate is surprising: on this small island there is a lush wet northern coastline, and a dryer leeward southern coastline. The northern coastline bears the brunt of wet-season storms and is generally rugged, the cliffs verdant with lush vegetation dripping into the ocean. The southern leeward coast shows accumulations of sediment from severely grazed and eroding slopes. Here the fruit trees growing in coastal villages and invasive mangroves contribute substantially to the drift material. The dry west coast is dominated by seed pods of the non-native kiawe (mesquite).

Lower elevations show parched and eroded fields. Mid elevation Kualapuu is surrounded by green coffee plantations. It is the higher elevations that boast permanent bogs and waterfalls, and are rich in natural vegetation. The island is also known for its sea cliffs reputed to be the highest in the world - the 1100 m high pali. These cliffs must be carefully negotiated to visit the villages of Kalawao and Kalaupapa, where over 8000 patients have succumbed to Hansen's disease (leprosy) over the past

150 years. The tragic history of Molokai and its independence-seeking, anti-development inhabitants contribute to the island's rural nature in comparison to other Hawaiian islands. A favourite lyric contains the words "Keep Molokai Molokai, see what they have done to Maui..."



The Hosten family searching for drift seeds at Milepost 19 along the Kamehameha V highway winding along the south shore.

The Hawaiian Islands are extremely remote from all the continents. The drift material found on Moloka'i can be eroded indicating a rough passage across rocks and sand, but almost never encrusted with marine organisms. This leads us to think that driftseeds are derived from adjacent
A good way to start looking for driftseeds on Moloka'i is along the Kamehameha V Highway on the southern coast where trees and plants that produce the drift material grow right on the beaches – this helps with identification! However, it must be remembered that not all the seeds/fruits found on a beach are drifters, as some are not buoyant.

The most common driftseeds along the southern coast include:

***Aleurites moluccana*,** Candle Nut/Kukui. Euphorbiaceae. Extremely common, found in all stages of development: green or black round fruits, wrinkled nuts that float like corks on the water. Polished black or white kukui seeds are used to make beautiful leis. The seeds are very oily and in historic times were cracked and the kernels strung on a stick to be burned like candles. The trees are planted along the streets and occur on many beaches. The candlenut tree and flowers are the official tree of the island. Buoyant.

Canavalia catharica, Maunaloa. Fabaceae. We were lucky to find the parent vine of the brown bean like seeds found occasionally on the beaches. The plant is a vine growing on shrubs on the sand, the pods are thick with a prominent ridge on one side and they contain several seeds. A *Canavalia molokaiensis* is mentioned in plant lists but *C. catharica* is the most probable along the southern coast. Occasional. Buoyancy unknown.

Casuarina equisetifolia, Ironwood. Casuarinaceae. The aggregate cone-like fruits are commonly found on beaches since their as sand binders and wind breakers. Buoyancy unknown.

Cocoloba uvifera, sea grape.

Cocos nucifera. Coconut, Arecaceae. Pick up a few, shake, and take it home to eat if it contains "milk." Common. Buoyant.

Coix lachryma-jobi, Job's Tears. Poaceae. The little gray tear-drop shaped, beady seeds are difficult to see on the gray sand. It is said that the plants were introduced in tropical regions by missionaries as beads for rosaries. Uncommon. Buoyancy unknown.

Dioclea sp., see Sea Beans.

Macadamia tetraphylla, Macadamia nut. Proteaceae. Picnic trash.

Molokai south shore beach.

Mangifera indica, Mango, Manako. Anacardiaceae. Derived from picnics or "wild" trees. Buoyancy unknown.

American Sugar Company to stabilize the beaches in the vicinity of Kaunakakai. Unfortunately, the

Drift seed assortment including mango, naupaka, milo, tropical almond, and others – see if you can spot them!

trees are completely taking over much of the leeward and coast and traditional Hawai'ian fish ponds to the detriment of fish habitat. Teams of young and not so young nature lovers come together to cut the impenetrable tangles of mangrove trees to restore the coastline and its ponds. The germinating seeds drift perpendicular in the water ready to strike root as soon as contact is made with land. The dedicated nature lover pulls them out and breaks then in tiny pieces. Common. Buoyant.

Mucuna sp., see Sea Beans.

Pandanus tectorius**,** Screw Pine, Walking Palm. Pandanaceae. The aggregate pineapple-like fruit falls apart when ripe, each separate unit looking like a short stubby paint brush. These little paint brushes are common on the beaches. Buoyant.

***Psidium* spp.**, Guavas. Myrtaceae. Small dried fruits. Vigorous plant invader found everywhere.

Scaevola sp., Naupaka. Goodeniaceae. Ribbed seeds found on beaches near parent plants. Common. Buoyancy unknown.

Sea Beans: *Dioclea* and *Mucuna.* Fabaceae. Both the saddle-shaped *Dioclea* and the hamburger bean with its wide hilum are found on the beaches but they are scarce, only one here and there and we did not find the parent vines. *Mucuna gigantea* is mentioned in the Moloka'i plant list but there is no mention of *Dioclea.* Rare. Buoyant.

Thespesia populnea, Milo. Malvaceae. Dry capsules and seeds found on beaches near parent plants. Buoyancy unknown.

Tournefortia argentea**,** Tree Heliotrope. Boraginaceae.

Terminalia catappa Tropical almond, Indian/Wild almond.. Combretaceae. Extremely common in all stages of fruit development, complete or eroded. The almond inside is said to be edible but difficult to extract. Indian almond trees are commonly planted along roads and beaches. Buoyant.

Unidentified: spherical, light gray disseminule not unlike a ping pong ball, could it be *Calophyllum inophyllum,* Alexandrian Laurel, True Kamani Clusiaceae. Buoyant.

Westernmost, dry beaches:
Disseminules are found as along the dry west coast are similar to the south coast, but in lesser abundance. The drift material is dominated by the introduced Mesquite, or Kiawe (*Prosopis pallid*).

Kaluapapa peninsula: Projecting from the northern coast, this peninsula catches more material out of the long-shore drift and is taxonomically more challenging. True sea beans *(Dioclea* and *Mucuna)* are more common than on other beaches. The historic gardens contribute significantly to non-native driftseed diversity. An interesting taxonomic riddle was posed by a more or less angular shaped 2-locular fruit splitting along a transversal line, somewhat resembling a happy-face smile. This seed was identified as ***Thevetia peruviana*****,** the dangerously poisonous Yellow Oleander (Apocynaceae) - an ornamental small tree growing profusely along usually dry streambeds. The seeds are not buoyant.

This list reflects what we have collected from April to June 2009 – more seeds will likely be found during other seasons.

Note: Since the initial driftseed collections of 2009, two new seeds have been identified. One seed of *Pritchardia hillebrandii* (Loulu palm) was collected on the northernmost beach of the Kalaupapa Peninsula. The only known wild population occurs on an islet off the north coast of Molokai. A grouping of *Barringtonia sp.* fruit were discovered above the high tide mark along a southern beach. The fruit had the appearance of being deposited at the site through human activity.

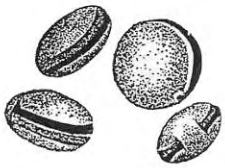
Since our last newsletter we received an email and this photograph from Dr. Marten Soerenson, from the University of Copenhagen, in Frederiksberg, Denmark. Marten mentioned the seed was found along the sea shores of SE Malaysia.

I did not know what it was but knew I had seen it before, and thought that our friends Izumi Hanno and Nicky Desvoyes would be just the people to ID this driftseed. After some e-mail communication between Paul Mikkelsen, myself, Izumi, and Nicky… the girls indeed did know the identity of this beautiful driftseed. It's a relative of the boxfruit, called *Barringtonia lanceolata*. I had no success finding a common name for this plant/seed.

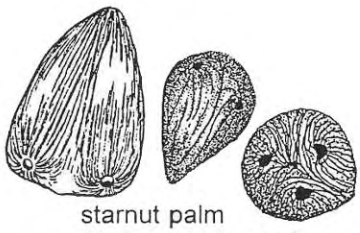
Another specimen can be seen at http://www.seabean.com/locations/Brunei/ and is worth the look as its shape is somewhat more elongated than the one pictured here.

Simple Guide to Common Drift Seeds

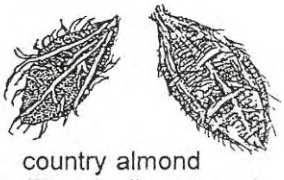
(Illustrations by Cathie Katz and Pamela J. Paradine)



hamburger bean
(*Mucuna* spp.)

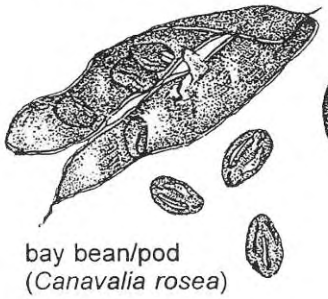


starnut palm
(*Astrocaryum* spp.)

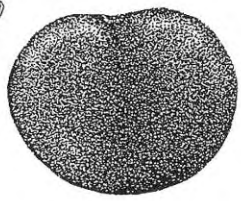


country almond
(*Terminalia catappa*)

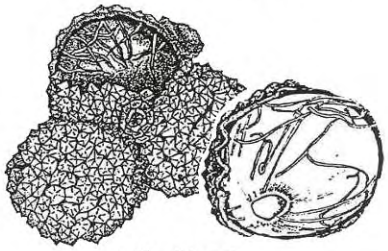
sea pearl/pod
(*Caesalpinia bonduc*)



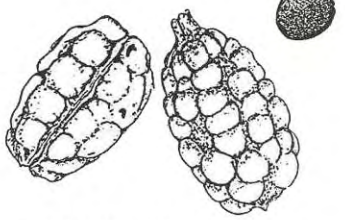
bay bean/pod
(*Canavalia rosea*)



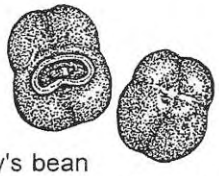
sea heart
(*Entada gigas*)



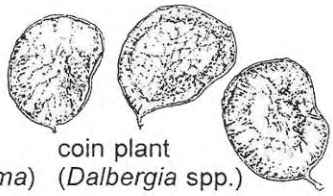
golfball/pod
(*Manicaria saccifera*)



hand grenade
(*Sacoglottis amazonica*)

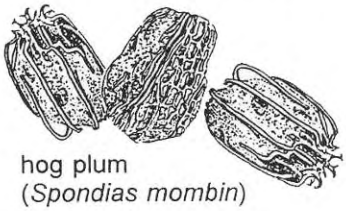


Mary's bean
(*Merremia discoidesperma*)

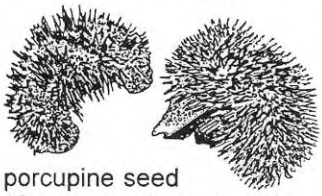


coin plant
(*Dalbergia* spp.)

sea purse
(*Dioclea reflexa*)

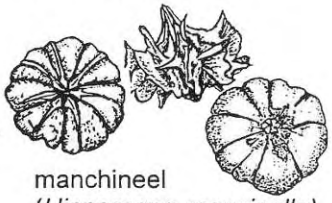


hog plum
(*Spondias mombin*)



porcupine seed
(*Caryocar microcarpum*)

LEGO® toys
(*plasticus legoii*)



manchineel
(*Hippomane mancinella*)

white/black/red mangrove
(various genera)

The Drifting Seed
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