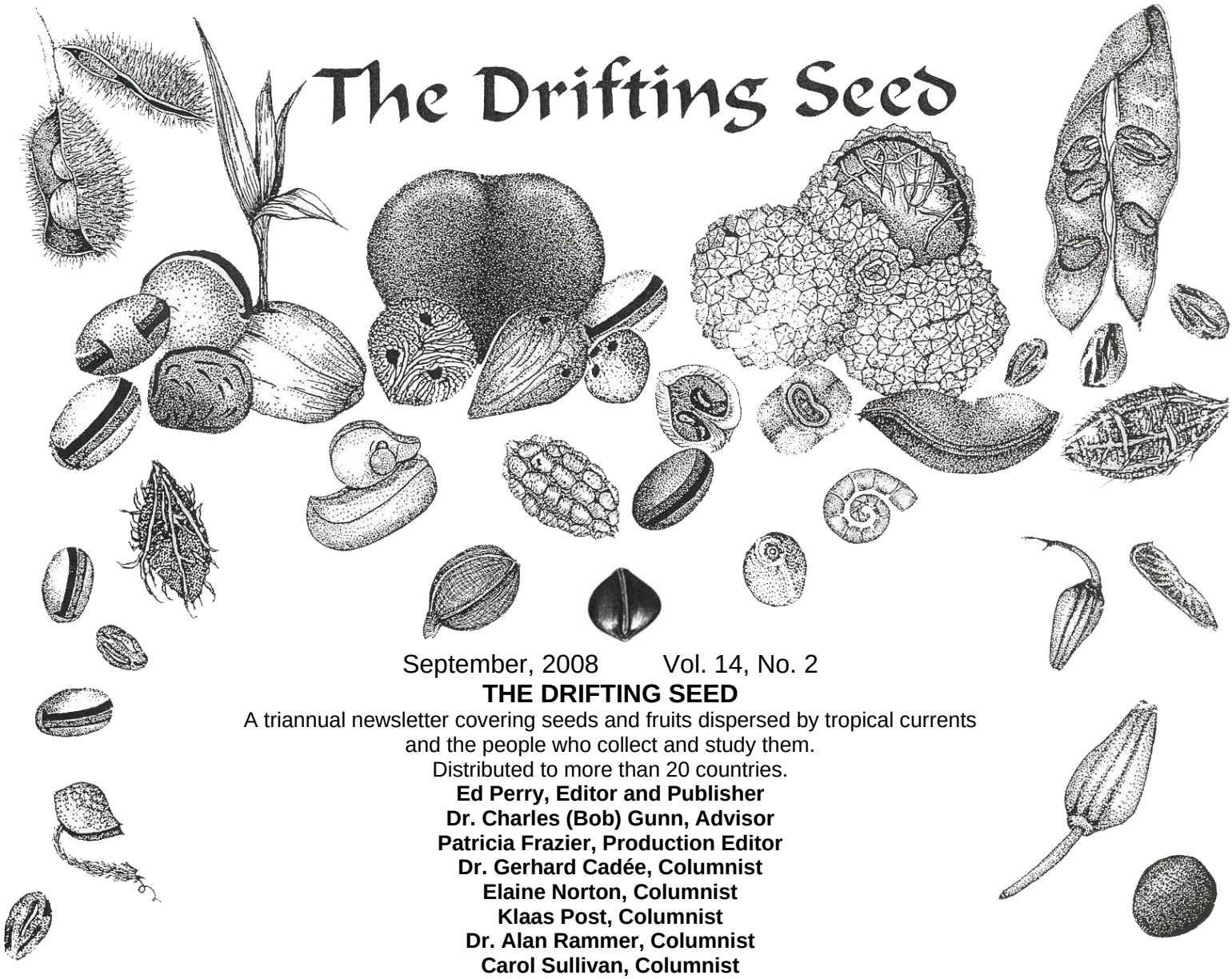
The Drifting Seed



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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.

The 13th Annual International Sea Bean Symposium will be held at the Cocoa Beach Public Library, October 17th-18th, 2008.

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Pine Cones from the North Sea Bottom

by Gerhard C. Cadée (Royal Neth. Inst Sea Res, Den Burg NL, cadee@nioz.nl)
& Klaas Post (Natural History Museum of Rotterdam NL)

The bottom of the Southern North Sea is one of the best places in the world to collect bones of the Pleistocene mammoth and other fossil mammals (Mol et al., 2008). Systematic collecting of these bones was started by Kortenbout van der Sluijs of the Geological Museum in Leiden (now Naturalis) around 1965, when the fishery began to use beam-trawls. This fishing method proved to be very useful to collect fossil bones and the fisherman were encouraged not to throw this bycatch away. Private collectors and scientists from the National Natural History Museum (Naturalis) Leiden and the Natural History Museum of Rotterdam alike have assembled huge and important collections.

Among these bones sometimes also fruits and seeds are collected, and the first idea was that they also might be fossils. The fruits and seeds collected by fisherman from the North Sea up to now include palm seeds of *Attalea* sp. and the ivory palm *Phytelephas* sp. (Cadée, 1988; Brochard & Cadée, 2005). These palm seeds cannot drift. In former ages, they were regularly transported to The Netherlands (Rijkelijkhuizen & Wijngaarden-Bakker, 2006). Some *Attalea* seeds (identified as *Orbignya,* but pertaining to the same palmseeds) have been recovered from ship wrecks (Kuijper & Manders, 2003). Those dredged from the North Sea might be also from shipwrecks. Nuts of the ivory palm were imported in Europe to be used as vegetable ivory i.e. for the manufacturing of buttons. They are still imported in small quantities. There is a small market for vegetable ivory as ivory from elephants may not be used any more, but buttons have been largely replaced now by plastic ones.

Recently the Natural History Museum of Rotterdam collected some pine cones from the North Sea bottom. These also were found together with fossil bones, leaving the possibilities of a fossil origin. However, they could be identified to belong to the Monterey pine *Pinus radiata* (Fig. 1) and *Pinus nigra* and are recent. Both cones are also regularly found in drift on the Dutch coast (Cadée et al., 2002; Brochard & Cadée, 2005). The Monterey pine originates from California, but is now cultivated all over the world for timber production. Apparently the Netherlands are too cold for this species, the nearest place where it grows is along the (warmer) southern coast of England. *P. radiata* cones arriving on our coast must originate from there or from other southern European coasts. The only pine that grew originally in the Netherlands was *P. sylvestris.* This species disappeared in the Late Middle ages but was re-introduced in the 16th century (Van der Meijden, 2005). For timber production in the Netherlands a couple of other pine species have been introduced later as well. *P. nigra* is most commonly used in the dune area of the Netherlands. Its cones are of the same size as those of *P. sylvestris* but the end-plate of the scales *P. nigra* are convex; those of *P. sylvestris* are flat or concave. The cone from the North Sea bottom – as well as those from the Dutch beach - belongs to *P. nigra*, which indicates it to be recent as well.

It is well known that not all drifting plant material ends up on coasts. Wolff (1979) gives an excellent overview of plant material dredged from the deep sea including drift seeds and fruits. Gunn & Dennis (1976) report some 20 species of tropical drift seeds and fruits from deep sea dredge samples and Horikoshi & Tsuchida (1984) report a mytilid bivalve *Adipicola longissima* found attached only to *Nypa* fruits on the deep sea bottom. The presence of these recent pine cones on the North Sea bottom therefore is no surprise. Such specific encrusters are not to be expected in the shallow North Sea. One *P. radiata* cone had a worm *Sabellaria spinulosa* and a bryozoan *Aspidelectra melolontha* growing on it. These are subtidal encrusters not typical for drifting material, so indicating the cone to be exposed for some time on the sea bottom.

Fig. 1. A Monterey pine (*Pinus radiata*) cone from the North Sea bottom, Length 11.2 cm.

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Tropical Storm Fay leaves One-day Bonanza on Fort Lauderdale Beach

by Elaine Norton, Fort Lauderdale, Florida

As all of us in Florida have felt the effects of Tropical Storm Fay during the week of August 17th, 2008 (some much worse than others), the weather event turned out to be a one-day bonanza for this gal !!

On Monday evening, August 18th, T.S. Fay was slowly making her way east across the southern part of the peninsula (after the 2nd of 4 landfalls). Since Fay was not predicted to become a hurricane nor predicted to bring any substantial damage, the only real thoughts on my mind were to shut down the office, get provisions, close the hurricane shutters, hope the power stayed on, and pray for seabeans. Waiting patiently through the night & during the next day until the "tornado warning" was dropped for Fort Lauderdale at 4pm on Tuesday, the 19th, I knew I had one chance, and one chance only to retrieve any beans before dark that night, which the storm may have left behind. That "one chance" is because the City of Fort Lauderdale's "Scraper Plow" would be sure to remove any wrack that washed ashore the next morning during its routine 7-to 8-am mission to make our beautiful beaches pristine (a regular inconvenience for this Southeast Florida Drifter, which I have noted to you before).

When I got down to the beach, it was still sprinkling slightly as the storm's trailing feeder bands were moving directly from south to north, the winds were sustained at about 25 mph, with gusts up to 40, and the southerly winds were quickly blowing sand over the weed and any possible beans. Time was of the essence.

With my "Mucuna Entada" bag filled with a water bottle, ziplocs and a towel, I walked as quickly as possible in a zig-zag fashion, and was able to cover almost all of the 2 mile distance between Oakland Park Boulevard north to the Lauderdale-By-The-Sea Pier in front of the hi-rise condos, gleefully picking up beans that hadn't already been covered by the ever increasing blown sand. While within ¼ mile of the pier, I encountered a girl heading south towards me, briskly walking

and also picking up beans. When we crossed paths she asked "*What are you picking up?*" I reluctantly showed her the hamburger bean that was in my hand and she stated quite firmly in a loud voice "*THIS IS MY AREA* !!." I was somewhat miffed by her abruptness and she really seemed to be blocking my forward motion. Not wanting to get into any altercation, I reluctantly acquiesced, turned back south and made my way in the other direction. I'd show her. I would walk faster and go another mile beyond my starting point and continue on towards Sunrise Boulevard before it got too dark. Unfortunately, I was now walking against the wind, was getting sand-burned and was having a hard time seeing, but I continued on and found a few more beans during my quest.

I saw some sad sights along the way….dead baby turtles….broken turtle eggs….and even a dead bird. I buried the baby turtles & bird, and re-staked the caution tapes that had fallen down around the turtle nests as I trekked back.

After a storm that caused minimal damage down here in South Florida, and unfortunately, substantial damage from flooding to my friends up on the Space Coast because of Fay's stationary position up there for over 3 days, I ended up with a one-day (4-1/2 hour) ***record*** count bean bonanza. Here is the result of my findings:

69 Mucunas (39 sloanei, 28 urens, 2 thick-banded)
8 Diocleas
1 black seabiscuit bean (rare down here…my 3rd ever found)
17 Seahearts
13 Starnut palms
6 Jamaican naval spurges
1 Antidote vine seed (large)
4 Prickly palms
2 Gray nickarnuts
1 Lantern tree seed (my 2nd ever found)
1 Black pearl
3 Nutmegs
2 Moonflower seeds
3 Kapok thorns
1 Unidentified bean
1 Container tag (for Curt)
Assorted pumice
.44 cents of beach coinage

Total drift seeds collected was 132 (see photo), which excludes the following 18 mentally-noted additional species identified along the way, which I don't really like to gather and did not pick up. Those forsaken identified species were Australian pinecones, bald cypress tree seeds, blister pods, coconuts (many sizes & pieces), coin vine seeds (large quantities), ivory-nut palm seeds, sea coconuts, laurelwoods, manchineel seeds, mahoe seeds, mahogany seeds, mango seeds, red mangrove (large quantities), black mangrove, white mangrove, screw pine seeds, sea-grapes and tropical almonds. There was a lot of "garbage" and plastic flotsam on the beach, but in my quest to collect as many beans as possible before dark, I really didn't have a lot of time to investigate those items.

I am feeling quite trilled about my bonanza, and as noted from the *World Guide to Tropical Drift Seeds* by Gunn & Dennis, southeastern Florida (between Miami Beach & Palm Beach) is one of the

best areas to find drift seeds, (with all due respect to my Brevard County beaner brethren) because of the Florida Current's proximity (a well-defined component of the Gulfstream system), whose inner edge at times flows within a mile or two of the coastline. Add a little tropical disturbance and *Vwa La!!* If only I didn't have to work and there were no scrapers every morning…….

A World of Drift Seeds

by Carol J. Sullivan, John Williams and Gerald Sullivan
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Traditionally, it has been accepted that the world of drift seeds constitutes approximately 0.1% of the estimated 250,000 terrestrial species of plants, ergo 250. A limited canvass of the literature strongly suggests that the total number of different drift seeds far exceeds that number.

Each of the following has previously been cited as a drift seed in one or more of the references in the bibliography. Synonymy has occurred in some instances, but allowed to remain because it is so ingrained in the literature. Any additions, deletions, corrections or other comments are encouraged.

This is definitely "a work in progress." It can use your help.

	Scientific Name	Common Name
1	Abuta sp.	Abuta
2	Acacia cyclops	Rooikans
3	Acacia farnesiana	Sweet acacia
4	Acacia longifolia	Western yarrow
5	Acrocomia spp.	Prickly palm
6	Adansonia sp.	Baobab
7	Aegiceras corniculatum	River mangrove
8	Afrocarpus falcatus	Outeniqua yellowwood
9	Albizia saman	Cow bean
10	Aleurites fordii	Tung nut
11	Aleurites moluccana	Candlenut
12	Alfonsia oleifera	Palm
13	Amomum sp.	Silky dogwood
14	Amphitecna latifolia	Black calabash
15	Amygdalus persica	Peach*
16	Anacardium occidentale	Cashew*
17	Andira galeottiana	Donovan's brain
18	Andira inermis	Cabbage bark
19	Anisophyllea corneri	
20	Annona glabra	Pond apple
21	Annona squamosa	Sugar apple
22	Apeiba aspera	Monkeycomb
23	Arachis hypogaea	Peanut*
24	Archidendron sp.	
25	Archontophoenix cunninghamiana	Bangalow palm
26	Areca catechu	Betel nut
27	Arecastrum romanzoffiana	Queen palm
28	Argusia argentea	Octopus bush
29	Artocarpus communis	Breadfruit
30	Astrocaryum alatum	Starnut palm
31	Astrocaryum sp.	Starnut palm
32	Attalea cohune	Cohune
33	Atuna racemosa	Makita
34	Avicennia germinans	Black mangrove
35	Baccaurea sp.	Onion tree
36	Bactris spp.	Beach palm
37	Barringtonia asiatica	Boxfruit
38	Barringtonia racemosa	Powder-puff tree
39	Beilschmiedia bancroftii	Yellow walnut
40	Bertholletia excelsa	Brazil nut
41	Bixa orellana	Annatto
42	Blighia sapida	Akee
43	Blumeodendron sp.	
44	Borassus sp.	Palm
45	Brackenridgea	Yellow hibiscus
46	Brassia actinophylla	Umbrella tree
47	Brownlowia argentata	Dungun
48	Bruguiera gymnorrhiza	Tumu
49	Cacougia coccinea	
50	Caesalpinia bonduc	Gray nickernut
51	Caesalpinia ciliata	Yellow Nickernut

52 Caesalpinia major — Brown nickernut
53 Cakile edentula — Sea rocket
54 Calatola costaricensis — Calatola
55 Calocarpum spp. — Egg fruit
56 Calodendrum spp. — Cape chestnut
57 Calophyllum calaba — Laurelwood
58 Calophyllum inophyllum — Tamanu
59 Calystegia soldanella — Sea bindwood
60 Canarium decumanum — Gapip nut
61 Canarium harveyi — Canarium nut
62 Canarium mehenbethune
63 Canavalia bonariensis — Beach bean
64 Canavalia cathartica — Mauna loa
65 Canavalia nitida — Cathie's bean
66 Canavalia rosea — Bay bean
67 Canavalia sericea — Silky jackbean
68 Canna sp. — Canna lily
69 Carapa guianensis — Crabwood
70 Cardiospermum grandiflorum — Balloon vine
71 Carica papaya — Papaya
72 Carpinus caroliniana — American hornbeam
73 Carya aquatica — Water hickory
74 Carya glabra — Pignut
75 Carya illinoensis — Pecan
76 Carya tomentosa — Mockernut
77 Caryocar glabrum — Smooth porcupine
78 Caryocar microcarpum — Porcupine seed
79 Caryocar villosum — Almendro
80 Cassia fistula — Golden shower
81 Cassia grandis — Pink shower
82 Cassytha filiformis — Devil's gut
83 Castanea sp. — Chestnut
84 Castanospermum australe — Morton bay chestnut
85 Casuarina equisetifolia — Australine pine cone
86 Casuarina spp. — Beefwood
87 Cerbera manghas — Dog bane
88 Cerbera odollam — Suicide tree
89 Ceriops tagal — Tengar
90 Chlaenandra sp.
91 Chrysobalanus icaco — Coco-plum
92 Chrysophyllum cainito — Star apple
93 Cinnamomum camphora — Camphor laurel
94 Citrullus lanatus — Citron melon*
95 Citrus spp. — Orange etc.*
96 Clerodendrum inerme — Seaside clerodendrum
97 Coccoloba laurifolia — Pigeon plum
98 Coccoloba uvifera — Sea grape
99 Cocos nucifera — Coconut
100 Coix lacryma-jobi — Job's tear
101 Colubrina asiatica — Vera
102 Combreton exalatum
103 Combretum laxum — Papaniel
104 Conocarpus erectus — Button mangrove
105 Cordia sebestena — Orange ginger
106 Cordia subcordata — Sea trumpet
107 Corylus avellana — Filbert*
108 Crescentia cujete — Calabash
109 Crinum americanum — Southern swamp-lily
110 Crinum asiaticum — Asian swamp-lily
111 Crudia schreberi
112 Cryptocarya latifolia
113 Cryptocarya pleurosperma — Poison walnut
114 Cupaniopsis anacardioides — Tuckeroo
115 Cycas circinalis — Sago palm
116 Cycas rumphii — Bread palm
117 Cynometra cauliflora — NanNam
118 Cynometra iripa — Wrinklepod mangrove
119 Dalbergia candenatensis — Dalbergia
120 Dalbergia ecastaphyllum — Coin vine
121 Dalbergia monetaria — Giant coin plant
122 Delonix regia — Royal poinciana
123 Dendrolobium umbellatum — Lala
124 Dendrosicus latifolius — Black calabash
125 Derris trifoliata — Common derris
126 Dialium schlechteri — Slick-seed
127 Dioclea hexandra
128 Dioclea javanica — Saddle bean
129 Dioclea megacarpa — Oho de mono
130 Dioclea panamensis

131	Dioclea reflexa	Sea purse
132	Dioclea sp.	Sea purse
133	Dioclea sp.	Ren's bean
134	Dioclea wilsonia	
135	Dioscorea bulbifera	Air yam
136	Dioscorea pentophylla	Yam
137	Dodonaea viscosa	Aalii
138	Durio zibethinus	Durian
139	Elaeis guineensis	African oil palm
140	Elaeocarpus grandis	Blue quandong
141	Elaeodendron xylocarpum	
142	Enallagma latifolia	Black calabash
143	Encephalartos spp.	Cycad
144	Endiandra sieberi	Hard corkwood
145	Entada gigas	Sea heart
146	Entada parvifolia	Hemi-modama
147	Entada phaseoloides	Snuffbox seabean
148	Entada rheedii	African dream seed
149	Enterolobium cyclocarpum	Large ear-pod
150	Enterolobium timbouva	Small ear-pod
151	Erythrina crista-galli	Wiliwili haole
152	Erythrina fusca	Ndrala
153	Erythrina herbacea	Coral bean
154	Erythrina sandwicensis	Wiliwili
155	Erythrina sp.	Roach egg
156	Erythrina variegata	Tiger claw
157	Eucalyptus spp.	Gum tree
158	Eugeissona minor	
159	Eusideroxylon malagangai	Belian
160	Excoecaria indica	Mangrove
161	Fevillea cordifolia	Antidote vine
162	Ficus sp.	Fig
163	Flindersia amboinensis	Iskumun
164	Garcinia mangostana	Mangosteen
165	Genipa clusiifolia	Seven-year apple
166	Gigasiphon humblodtianum	
167	Gigasiphon macrosyphon	
168	Gigasiphon schlechteri	
169	Gnetum sp.	Spanish koint fir
170	Grevillea robusta	Silky oak
171	Grevillea gibbosa	Rose apple
172	Grias cauliflora	Anchovy pear
173	Guarea sp.	Muskwood
174	Guazuma ulmifolia	Mutamba
175	Guettarda speciosa	Buabua
176	Guilandiro crista	Molluca nut
177	Gyrocarpus americanus	Propellor bush
178	Hakea sericea	
179	Helinus ovata	
180	Heritiera globosa	Dungun besar
181	Heritiera littoralis	Puzzle fruit
182	Hernandia nymphaeifolia	Lantern tree
183	Hernandia sonora	Lantern tree
184	Hevea brasiliensis	Rubber tree seed
185	Hibiscus diversifolius	Swamp hibiscus
186	Hibiscus tiliaceus	Mahoe
187	Hippomane mancinella	Manchineel
188	Hodgsonia macrocarpa	Hodgsonia seed
189	Hura crepitans	Sandbox tree
190	Hymenaea courbaril	West Indian locust
191	Hymenocallis lirisome	Spider lily
192	Hyperbaena valida	
193	Hyphaene compressa	
194	Hyphaene pertersiana	Real fan palm
195	Inocarpus edulis	Tahitian chestnut
196	Inocarpus fagifer	Tahitian chestnut
197	Intsia bijuga	Kwila
198	Intsia palembanica	Marbau
199	Ipomoea alba	Moonflower
200	Ipomoea macrantha	Sea moonflower
201	Ipomoea pes-caprae	Moonflower
202	Jacquinia pungens	
203	Jatropha curcas	Purging nut
204	Jatropha sp.	
205	Jubaeopsis caffra	Pondo palm
206	Juglans ailantifolia	Japanese walnut
207	Juglans cinerea	White walnut
208	Juglans jamaicensis	Tropical walnut
209	Juglans nigra	Black walnut
210	Juglans regia	English walnut

211 Kigelia pinnata — Sausage tree fruit
212 Lactaria salubris
213 Laguncularia racemosa — White mangrove
214 Lathyrus japonicus — Sea pea
215 Lecythis sp. — Sapucaia nuts
216 Leucaena glauca — Wild tamarind
217 Liquidambar styraciflua — American sweet-gum
218 Litchi chenensis — Lychee
219 Lithocarpus spp. — New Guinea oak
220 Lodoicea maldivica — Coco-de-mer
221 Luffa insularum — Dishrag gourd
222 Lumnitzera racemosa — Tonga mangrove
223 Macadamia tetraphylla — Macadamia
224 Machaerium falciforme
225 Machaerium lunatus
226 Macrozamia communis — Burkawang
227 Mammea americana — Mamme apple
228 Mangifera indica — Mango*
229 Manicaria saccifera — Sea coconut
230 Mastichodendron capiri — Mastic
231 Mastichodendron foetidissium
232 Maximiliana caribaea — Cocoid palm
233 Melia azedarach — Chinaberry
234 Merremia discoidesperma — Mary's bean
235 Merremia tuberosa — Wood rose
236 Metroxylon amicarum — Caroline Ivory Nut Palm
237 Metroxylon vitiense — Sago palm
238 Mimusops caffra — Red milkwood
239 Momordica charanta — Balsam apple
240 Mora excelsa — Mora
241 Mora oleifera — Mora
242 Morinda citrafolia — Indian mulberry
243 Moringa oleitera — Horseradish tree
244 Mucuna fawcettii — Thick-banded mucuna
245 Mucuna flagellipes — Duiker
246 Mucuna gigantea — Velvet bean
247 Mucuna holtonii — Black mucuna
248 Mucuna myriaptera
249 Mucuna nigricans — Black mucuna
250 Mucuna sloanei — Hamburger
251 Mucuna urens — Hamburger
252 Myristica fragrans — Nutmeg
253 Myristica surinanensis — Ucuuba
254 Neisosperma oppositifolium — Vaoko
255 Nelicia sp.
256 Nelumbo lutea — American lotus
257 Nelumbo nucifera — Sacred lotus
258 Noltia africana
259 Normanbya normanbyi — Black palm
260 Noronhia emarginata — Madagascar olive
261 Nypa fruticans — Nypa
262 Ochrosia elliptica — Elliptic yellow-wood
263 Ochrosia oppositifolia — Bwa sousouri
264 Omphalea diandra — Jamaican naval-spurge
265 Omphalea panamensis
266 Omphalea papuana — Otto's folly
267 Omphalea triandra
268 Orania aruensis — Rattan
269 Orbignya cohune — Cohune
270 Ormosia coutinhot — Red beans
271 Oxyrhynchus trinervius — Little marble
272 Oxyrhynchus volubilis — Little marble
273 Pachira aquatica — Three-lobed Pachira
274 Pachystigma spp. — Rock toothwort
275 Pandanus tectorius — Screw pine
276 Pangium edule — Pangui
277 Parinarium glaberrimum — Chenitem
278 Passiflora sp — Passion fruit
279 Pelliciera rhizophorae — Tea mangrove
280 Peltophorum inerme — Yellow flamboyant
281 Persea americana — Avocado
282 Phaleria disperma — Suni
283 Phoenix dactylifera — Date palm
284 Physostigma cylindrosperma — Calabar
285 Physostigma venenosum — Calabar bean
286 Phytelephas macrocarpa — Ivory nut palm
287 Pinus sp — Pine cone

288	Pistacia sp	Pistachio*
289	Pithecellobium belizensis	
290	Pithecellobium dulce	Manila tamarind
291	Pithecellobium ebano	Texas ebony
292	Plantanus occidentalis	American syca-more
293	Pleiogynium timoriense	Burdekin plum
294	Podocarpus sp.	Yew
295	Pongamia pinnata	Pongamia
296	Poupartia amazonica	Black sea biscuit
297	Pouteria campechiana	Egg fruit
298	Pouteria sapota	Mamey sapota
299	Prioria copaifera	
300	Prosopis juliflora	Mesquite
301	Prunis armeniaca	Black cherry*
302	Prunus cerasifera	Methley plum*
303	Prunus persica	Peach*
304	Prunus turneriana	Almond bark
305	Pseudocalymma alliacerum	Garlic vine
306	Psidium guajava	Guava
307	Psidium sp	Guava
308	Pterocarpus amazonica	Gunduru
309	Pterocarpus officinalis	Bloodwood
310	Pterocymbium javanicum	Taluto
311	Quercus bennettii	Mempening began
312	Quercus humboldth	Acorn
313	Quercus macrocarpa	Giant acorn
314	Quercus spp.	Oak acorn
315	Quisqualis indica	Quisqualis
316	Raphia taedigera	Swamp palm
317	Rhizophora mangle	Red mangrove
318	Rhizophora mucronata	Mangrove
319	Rhizophora samoensis	
320	Rhizophora stylosa	Stilt mangrove
321	Ricinus communis	Castor bean
322	Rytigania sp.	
323	Sabal palmetto	Sabal palm
324	Sacoglottis amazonica	Handgrenade
325	Sacoglottis gabonensis	Akouapo
326	Salicoria virginica	Pickleweed
327	Samanea saman	Monkey pod seed
328	Sapindus oahuensis	Soapberry
329	Sapindus saponaria	Black pearl
330	Scaevola koenigii	Beach naupaka
331	Scaevola plumieri	White inkberry
332	Scaevola taccada	White inkberry
333	Schinus terebinthifolius	Christmas berry
334	Schotia latifolia	Forest boar-bean
335	Sclerocarya birrea	Marula
336	Scyphiphora hydrophylacea	Mangrove
337	Serianthes grandiflora	
338	Sideroxylon capiri	Mastic
339	Sideroxylon foetidissimum	Mastic
340	Smilax bona-nox	Bullbrier
341	Smythea lanceata	
342	Smythea luctuosa	
343	Sonneratia alba	Pornupan mangrove
344	Sonneratia caseolaris	Mangrove apple
345	Sophora mirophylla	Kowhai
346	Sophora secundiflora	Mescal bean
347	Sophora tomentosa	Necklace pod
348	Spondias dulcis	Hog plum
349	Spondias mombin	Hog plum
350	Sterculia apetala	Panama tree
351	Sterculia carthaginensis	Chica
352	Sterculia foetida	Java olive
353	Strongylodon lucidus	Jade vine
354	Suriana martima	Bay cedar
355	Swietenia mahagoni	West Indian mahogany
356	Syagrus sp.	Queen palm
357	Syzygium cuminii	Java plum
358	Syzygium jambas	Rose apple
359	Tacca leoteopetaloides	Tacca
360	Tacca pinnatifida	Pia
361	Talisia olivaeformis	
362	Tamarindus indica	Tamarind
363	Taxodium distichum	Southern cypress
364	Tecoma stans	Yellow bells
365	Teijsmamiodendron pterododium	
366	Telfairia pedata	Oyster nut
367	Terminalia catappa	Tropical almond

368 Terminalia spp. Tropical almond
369 Tetragonia tetragonioides Warrigal greens
370 Theobromo cacao Chocolate
371 Thespesia populnea Mahoe
372 Thevetia peruviana Yellow oleander
373 Tournefortia argentea Tree heliotrope
374 Tournefortia gnaphalodes Sea lavender
375 Trapa bispinosa Water chestnut
376 Trapa natans Water caltrop
377 Tribulus cistoides Jamaican fever plant
378 Triumfetta procumbens Mautofu
379 Uniola paniculata Sea oats
380 Vantanea guianensis
381 Vateria papuana
382 Vateria umbonata
383 Vernicia fordii Tung oil tree
384 Vigna lutea Vetch
385 Vigna luteola Deer pea
386 Vigna sp. Beach Pea
387 Vitex trifolia Simpleleaf chaste tree
388 Wedelia biflora Yellow dots
389 Widdringtonia sp.
390 Xanthium occidentale Old man saltbush
391 Xanthium strumarium Cockleburr
392 Ximenia americana Tallownut seed
393 Xylocarpus moluccensis Cannonball Tree

* Generally considered beach garbage.

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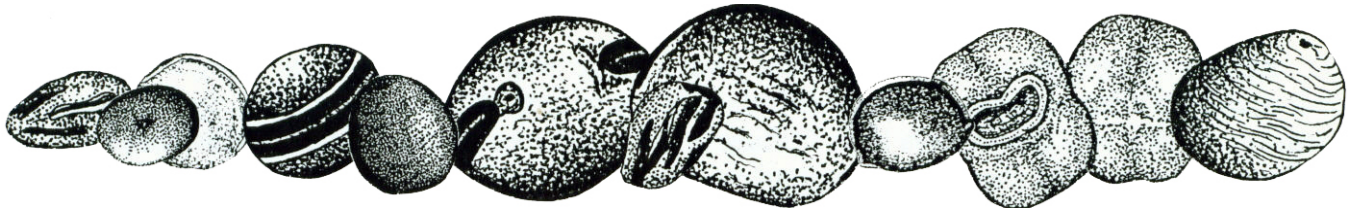
He has half the deed done who has made a beginning.
Horace



Cathie's Bean
How Rare is Rare?

Jerry Sullivan and Alan Rammer
geraldsully@yahoo.com and rammeadr@dfw.wa.gov

"Those of you looking for this seed, be patient.
It is most rare, and only comes along once in
a lifetime. Kind of like Cathie Katz!"

So proclaimed editor Ed Perry back in 2002 following the acceptance of Cathie's bean as the official common name for *Canavalia nitida*, one of the most rare and beautiful drift seeds.

How rare is rare? A cursory review of the literature revealed a limited number of instances in which *Canavalia nitida* was reported as a drift seed. In the early 1900's MacGillivray of Scotland added one to his collection, C.T. Simpson (1) in 1920 located one on a Florida beach, while in 1964 Sauer (2) reported one either in Florida or the Caribbean. Gunn and Dennis (3) cited in 1976 four colors for *C. nitida* which included dark wine, red, black and tan. They also stated "We have collected drift seeds from the beaches of southern United States." This really does not tell us much but presumably collections were made in Florida and from the colors reported, maybe as few as four were found.

The Florida beaches have been a haven for Cathie's bean seekers; Ed Perry in 1999, John Beerensson, 2001 and Christopher Boykin in 2004. On April 29, 2008, possibly the find of the century was made by Bruce and Nancy Haver who found two Cathie's beans a short distance from one another on their Florida beach. Rumor has it that Mike and Sam Burnett of Port O'Connor, Texas, have three Cathie's beans between them.

Alan Rammer, a Washington State Fish and Wildlife Marine Educator related the following: "Sam found her Cathie's bean before the symposium in 2004 because she had it with her for all to drool over (including me!). This was my first symposium. Mike found his first one after that, and miraculously found his second on Cathie Katz's birthday on May 14th of this year. Some mutual friends, John and Debbie Anderson of Forks, Washington, were visiting Mike and Sam in mid-May and they found one too. I found mine on May 30th the day before I flew home. Mike told me that mine was the 5th one he knew of from Texas." All of these were collected from the Matagorda area beaches along the Texas gulf coast.

All in all, one might possibly surmise that less than twenty Cathie's beans have been found. That, indeed, certainly qualifies it as a very, very rare drift seed.

The plant itself may also be rare since its distribution is limited; confined to the Caymans, Cuba, Dominican Republic, Haiti, Puerto Rico and both British and U.S. Virgin Islands, all small islands in the Caribbean.

Internet photographs depict Cathie's bean as dark red wine, dark red and also shades of pink in color. A number of these seeds exhibited black colored blotches. Totally black or tan colored ones were not illustrated.

During Memorial Day weekend, specifically May 25, 2008, less than one-half mile of beach wrack had been examined with limited success. The Texas sun on Mustang Island had created a heat index of 115 degrees and without cloud cover it was nearly unbearable. Near collapse, a short water break at the auto was taken. The debate then began—quit now and survive or continue the search for the ever elusive drift seeds. Y'all already know the answer, same as yours. Barely back to the wrack, the peripheral vision of the laser eye registered a small round maroon-colored object twenty feet away on a tuft of fresh golden-colored sargassum. A rotation of the shoulder brought the sinister eye into play and in less than a nanosecond, the neural synapses had all fired, dispatching

electrical impulses to the brain—it had to be, there was no doubt! Unbelievable! Yes, yes, it was! It is virtually impossible for one to imagine the adrenaline rush and resulting sensation of euphoria. There was also an uncontrollable need to rush home and share this once in a lifetime happening with my wife, Carol. She simply would not have a clue.

Some five minutes later I confronted her with this monumental find. This gem of the gulf was offered by open palm for her examination and identification (just don't touch). Her immediate but very casual response was, "Okay ---a Cathie's bean, it's illustrated in the first couple of pages of Ed's book (4). Here, let me show you." Come on give me a break, at least a pat on the head! Illustrated here is my Cathie's bean nestled in sargassum, whereas, Rammer's is palm presented.

Rammer recalls his encounter in the following manner: "It was setting on clean white sand between two clumps of sargassum with the sun shining on it. The sensation of seeing it was much like running head first into a brick wall. Still get all excited thinking about it. I have a special glass box for that bean. Mike sent me some Matagorda sand and dried sargassum, so I am now ready to complete my mini-beach display for my bedroom dresser."

Don't despair. You may become the next member of the *chosen few.* The very next wrack you encounter may well harbor your own personal Cathie's bean. Lots of luck fellow drifters, but a bit of sage advice: "don't hold your breath until it happens."

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A very beautiful woman hardly ever leaves a clear-cut impression
of features and shape in the memory: usually there remains only an aura of living colour.
William Bolitho

Drift Items from Agony Beach

John Williams & Seabeader Sullivan
John.williams@mail.utexas.edu & geraldsully@yahoo.com

This was a "guy thing" which involved a gathering of ten longtime male acquaintances with the main purpose of pursuing the elusive sailfish. As it actually evolved, it was mostly retelling old lies and creating new ones which were made more palatable by quaffing down assorted local cervezas. Needless to say, the fish population was not diminished one iota.

Welcome to "agony beach"! This is the beach at Puerto Escondido, Mexico, and so labeled because of the massive abundance of giant acacia thorns embedded in the sand and wrack. Even with protective footwear, klutzy John succeeded in skewering his rather large toe on a super large hidden thorn. He was the maverick in this group because of his drift seed fixation and even under these hazardous health conditions, he was relentless in this pursuit.

The following were resurrected from the wrack:

Acacia thorns
Acorn
Annatto
Bay bean
Beach glass
Black pearl
Cabbage bark
Carrotwood
Castor bean
Coconut
Coco-plum
Hamburger bean
Hog-plum
Lucky nut
Manchineel
Mango
Mastic
Papamiel
Plastic debris
Prickly palm
Quisqualis
Railroad vine
Royal poinciana
Sea sponge
Sugar-apple
Tropical almond
Tropical walnut
West Indian locust

The most significant find was an intact annatto pod (*Bixa orellana*) which upon drying released fourteen (14) small irregularly shaped, brown seeds. This may be the first report of an annatto pod and/or seeds as a drift disseminule. Apparently the intact pod is necessary for ocean distribution since the dried seeds tested in authentic gulf water were immediately "El Sinko."

These tiny seeds contain a diverse mixture of closely related chemical compounds, collectively designated as carotinoids which range in color from red to orange to yellow. Commercially these pigments are employed as coloring agents for cheeses, soft drinks, oils, soups, butter etc. In yesteryear one may recall the ritual of squeezing the colorless margarine in a plastic bag with a small

amount of annatto until a uniformly yellow-colored butter substitute was formed. Milled annatto seeds may be found in the spice section of today's supermarket. Over a hundred medicinal uses for annatto are listed, ranging from an aphrodisiac to an aggressive stimulant for bulls engaging in fights to their death in bullrings. Scary!

Hoards of *Combretum laxum*, or more commonly known as papamiel, were intermixed in the wrack. Dunn and Dennis first reported this winged seed as a drift disseminule from the Yucatan Peninsula.

Another interesting find were two perfectly matched halves of a royal poinciana pod *Delonix regia*, along with fourteen (14) dispersed seeds in the near vicinity. Since the seeds do not float, the intact pod must have washed ashore, dried, split in two, thereby releasing the seeds into the wrack.

The remaining disseminules listed fairly well mirrored those reported in 1949 for the drift seeds found on San Jose Island in the Gulf of Panama (1). Much like those found by Johnston (1), the seeds found at "agony beach" were attributed to local flora. The near absence of collectible seabeans, i.e. hamburgers, seahearts, sea purses, etc., might be explained by commercial demand from local collectors, since many vendors in town sold seabean jewelry. Alternatively, it could have simply been the wrong time of the year.

Although there were horrific amounts of drift garbage present, it was somewhat reassuring in that all of the plastic items observed were devoid of turtle bites even though a large population of turtles reside in the area. The ingested "tabs" of plastic are implicated as major contributors to the demise of the sea turtle.

Much thanks to Editor Ed for his identification of these drift seeds.

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News and Notes

Florida Beach Basics™ – The Space Coast
Just What You Need to Know!

Long-time Drifters Marge Bell, Jim Angy, and Matt MacQueen are proud to announce their latest product, *Florida Beach Basics™ – The Space Coast.* The DVD and six UV-coated reference cards describe the Space Coast's beaches from Cape Canaveral and Cocoa Beach south to Sebastian Inlet and the natural treasures you may find along this beautiful stretch of Florida coastline.

The DVD contains eight five-minute tutorials that will help find your way around Brevard County, get to a beach you might otherwise miss, and identify the birds, sea turtles, sea-beans, shells, plants, and flotsam found on the County's beaches. The six colorful reference cards can go with you to the beach to remind you of what you learned on the DVD.

The DVD is jam-packed with useful, basic information, in easy-to-watch short segments. The cards and DVD are sold in a reusable drawstring poly bag with removable labels. In keeping with the underlying theme of treating the environment and its inhabitants with respect, the DVD is packaged in a recycled stock jacket printed with soy ink.

You'll recognize names and/or faces of people that appear in the DVD: Dr. Curtis Ebbesmeyer, Ed Perry, Cecelia Abbott, and Blair and Dawn Witherington. And at www.FloridaBeachBasics.com, you'll find a product demo, video clips of a beach walk with Dr. Curtis Ebbesmeyer, a video clip of Alice Lowe talking about her beach walk methods, a Reference section, and a Beach Buzz Blog with news of what's going on at the beach, nature-wise.

To purchase the kit, available for $15.00 (shipping is free), visit www.FloridaBeachBasics.com. The kit will also be available at the Sea-Bean Symposium.

This e-mail from a new fan in Ireland:

Hi, I'm from Belfast Northern Ireland, last week I was walking along White Park Bay, a beach on the north coast of **Ireland**, and came across this seabean (I believe it's a **seaheart**) and was wondering if you could provide any information about it. It was found on the ninth of June this year along the high water mark. Any information regarding where it came from and how common they can be found in Ireland would be excellent. From information I obtained from the Internet I think it might be from the Amazon on a plant called a monkey ladder vine, found along the river and has floated the whole way to Ireland along the gulf stream! This seems amazing to me if true! (And possible could be complete balderdash!) Like I say, any information you may have about this sea heart, even your best guess, would be great. I've included some photos of the offending item, take it easy!
Thanks, hope to hear from you soon,
Darran (delbotron@hotmail.co.uk) (A new seabean fan)

(**editor's note**: I verified the identity of the sea-bean for him and outlined the possibility of how it might have arrived, I asked Darran to write a short piece for the newsletter; his response below.)

After a wonderful jaunt in the car following the scenic road of Northern Ireland's rugged north coast. My (merry) band and myself ('Papa New Guineau and the Coconuts') and Bengie the dog, (who incidentally threw up in the car over the band's Italian maracas player's leg in the back seat, sorry Ademillia it was too funny!) made a few pit stops at the many scenic hideholes on the way, known as Ireland's Jurassic Coast: one such stop on this beautiful stretch of Ireland is White Park Bay. When I was younger I found a clay pipe over 100 years old on this beach and a gold laden ship from the Spanish Armada (1588) crashed a bit further up the coast. So there's gold in them there... beach. Anyway, in

the middle of our 'picnic' which consisted of dry roasted peanuts and tins of draft Guinness we went on a walk along the beach, I was doing my usual beachcombing routine and my pockets were already filling full of interesting stones when I noticed something just above the high tide mark.

A strange wind caressed the beach as I came upon the sea heart, and I could nearly swear I heard angelic singing straight from a Charlton Heston film as I picked the beauty up. My first seabean! I've included some other of the finds we made that day including a really cool sand drawing someone did. The day we found the bean was such a fun filled day the cherry on the top was the fact that the seaheart came to visit us from such a long way away. You could only part me from my seaheart now from my cold dead hand!

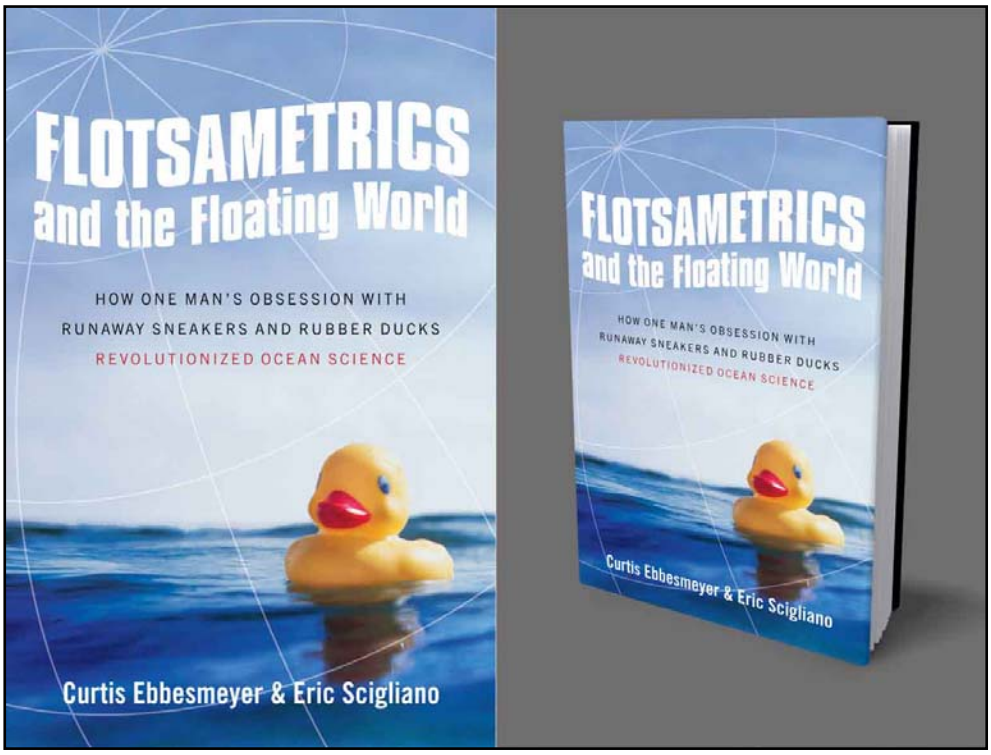
We are very excited that **Izumi Hanno**, our world traveling seabeaner and artist, along with her companion **Jim Godfrey**, will once again be with us at this year's Symposium!

"Travels with Mr. Seabean (Seeds Around the World)" will be her presentation. Izumi Hanno is a botanical artist, a cartoonist and a beachcomber. Jim Godfrey is a world traveler, surfer and writer.

Over 5 years, they have traveled by motorcycle, boat, bus, foot, hitchhiking, plane and 4x4 researching seeds. In their presentation, they will reveal the travel secrets of South East Asia for seeds, beaches, Asian cultures and their vision of 'The Seed Museum' in Sabah, Borneo.

Bill and Sue Woodwell (and their dog **Blue**) of Melbourne Beach, Florida, reported some strange beach activity after the passing of tropical storm Fay in late August of this year. Migrations of **great blue land crabs** (*Cardisoma guanhumi*) passed their house in droves as they moved from lagoon to beach after the historic rains to the area.

Great blue land crabs have been mentioned in past issues of this newsletter. Some islanders believe that you can rid a hole of a land crab by dropping a nickernut (*Caesalpinia bonduc*) into the crab's den, who after failing to remove the seed with its claws, gets frustrated and moves on to make its home somewhere else.



We are looking forward to the release of Dr. Curtis Ebbesmeyer's forthcoming book, ***Flotsametrics and the Floating World***, due out in April of 2009. Curt's articles and stories over the years have been of great interest to beachcombers and we are excited to finally have this work by one of our very favorite Drifters.

As usual, Curt will be with us at this year's Symposium to share with us what we can expect to find floating in our oceans this year. Who knows, maybe this will be the year someone finds a LEGO® toy on our local beaches?

These pictures are from Bermuda Drifter **Judie Clee**. This appears to be a very different *Dioclea* species—one this editor has only seen a handful of times. Most of the seeds are nearly cone shaped when resting flat and looked down upon, and the hilum of the seed makes the dome of ice cream that sits atop the cone. Does anyone know this seed? Send your comments or identifications to Seaheart88@aol.com (Ed Perry) and Judieclee@logic.bm&gt (Judie Clee).

Experience has two things to teach: The first is that we must correct a great deal; the second that we must not correct too much.
Eugène Delacroix

Thirteenth Annual International Sea-Bean Symposium and Beachcombers' Festival

Cocoa Beach Public Library—550 North Brevard Avenue, Cocoa Beach, Florida 32931

Open Free To The Public, October 17th & 18th, 2008

Schedule of Events*

Through the weekend: Sea-bean collections and displays, experts, sea-bean polishing, the famous Bean-O-Matic, jewelry, T-shirts, slide-shows, speakers, books, authors, international guests, raffle and contests (including the ever popular "ODD-BEAN" contest, and the Saturday morning "BEAN-A-THON" beachcombing bonanza!) Sea glass identification on Saturday only.

We are pleased to announce Mr. Richard LaMotte as this year's keynote speaker and authority on beach/sea glass. Richard is vice president of the North American Sea Glass Association and author of the award-winning book *Pure SEA GLASS* (2004). He's an all around expert on beach glass. This once common find on our beaches is unfortunately being replaced by plastics. Richard will be at the event on Saturday to sign copies of his book and identify rare pieces of glass.

Natural history writers and books will be available through the weekend. Krieger Publishing Company will be pleased to once again present *Sea-Beans from the Tropics: A Collector's Guide to Sea-Beans and Other Tropical Drift on Atlantic Shores*, by Perry/Dennis (2003). Ed Perry will be on-hand to sign copies. Krieger will also have the reprint edition of the *World Guide to Tropical Drift Seeds and Fruits*. Blair and Dawn Witherington are the authors of the newly published *Florida's Living Beaches* (Pineapple Press, 2007) which is a guide to anything and everything you may encounter on Florida's beaches, featuring not only sea-beans, but also shells, fish, plants, birds, and even the "green flash!" Blair and Dawn will be at the Symposium with copies of their book. The ever-popular *The Little Book of Sea-Beans* will also be available. Jim Angy, Marge Bell and Matt MacQueen of Still Nature Productions will be offering their digital books and their new *Beach Basics*. This year we will again also make available for sale Cathie Katz' beautifully written and illustrated *The Nature of Florida's*…...series.

Thursday, October 16th (3-5pm)

Everyone is invited to the main conference room at the Cocoa Beach Public Library for an informal get-together and introduction, discussion of symposium plans, and to set up displays for the weekend. We need lots of help setting up tables, chairs, and displays, so please feel free to donate time and suggestions. At 6pm those interested can meet at Roberto's Little Havana Restaurant (1/2 mile south of the library at 26 N. Orlando Ave.—this place has GREAT Cuban food, and has become a Symposium tradition).

Friday, October 17th (9am-5pm)

Displays and collections open to the public all day, free, from 9am to 5pm. Enter your seeds/glass for the ODD-BEAN contest.
11 to 11:45am: *Beginners' Beachwalking* (slide show) by Sebastian Inlet State Park Ranger Ed Perry.
2 to 2:45pm: *What's Floating Our Oceans This Year?!* by Dr. Curtis Ebbesmeyer
5pm: The library closes; meet for dinner at Anacapri (This great restaurant is just east of the library in walking distance).

Saturday, October 18th (8am-9pm)

Displays and collections open to the public all day, free, from 9am to 9pm. Enter your seeds for the ODD-BEAN contest (see 4:30).
8:00 to 10:00am: Bean-A-Thon 2007—You are on your own; don't come to the library first if you participate. Collect sea-beans and or toys/trash/sea-glass on any beach between Canaveral National Seashore and Sebastian Inlet. You MUST have your beans/toys/sea-glass at the library by 10:30am. Contest is judged/tallied per individual effort in the 2hr. time frame, please.
9:00am: Library opens.
10:30 to Noon: Judges will tally Bean-A-Thon entries outside in front of the library (awards at 7pm that night).
1:00 to 2:00 pm: *Travels with Mr. SeaBean* by Izumi Hanno of the Seed Awareness Network
3 to 4pm: *Polishing Your Sea-Beans* co-presentation by experts Bill Blazek and Alice Lowe–automated and hand polishing methods.
4:00 to 4:30pm: **GROUP PICTURE OUTSIDE THE LIBRARY! Be in it! Bring your camera!** photos by Jim Angy
4:30pm: ODD-BEAN contest judging (for entries submitted all through the weekend). In a baggie with your name, address/phone number place your shiniest sea heart, largest Mary's bean, and rarest piece of sea glass (in honor of this year's keynote speaker) from an existing sea-bean collection. These entries DO NOT have to be found in the Saturday morning Bean-A-Thon. Please enter!!!!
Dinner Break: 5:00pm to 7pm: Tables and displays will be taken down in main room in prep. for the keynote presentation.
7:00pm: Prompt! Bean-A-Thon and contest awards and certificates presented. Raffle winners chosen.
7:45 to 8:45pm: **Keynote speaker** Mr. Richard LaMotte, *Pure SEA GLASS*— 9pm: Library closes for Symposium.

Sunday, October 19th (9-11am)

Take down displays; small business meeting to discuss and schedule dates/help for next year's symposium.

*October is still HURRICANE SEASON in Florida, so our schedule is at the mercy of the powers beyond our control. Hurricanes are wonderful for beaning, but can be dangerous for beachwalkers. Our beachcombing and Symposium activities may be cancelled because of severe weather, in which case we'll follow evacuation procedures to the mainland. Hurricane information will be available at your hotel and at the library.

Travel and Hotel Information for Symposium 2008 in Cocoa Beach

Cocoa Beach is about an hour drive from Orlando International Airport.

La Quinta: http://laquinta.com/lq/properties/propertyProfile.do?ident=LQ622&propId=622
Luna Sea: http://www.lunaseacocoabeach.com/reservations.php
Pelican Landing: http://www.angelfire.com/on2/pelicanlandingresort/main.html
South Beach Inn: http://www.southbeachinn.com/accommodations.htm
Anthony's On The Beach - 3499 S. Atlantic Ave., Cocoa Beach. 783-9892
Beach Island Resort - 1125 S. Atlantic Ave., Cocoa Beach. 784-5720
Beach Place - 1445 S. Atlantic Ave., Cocoa Beach. 783-4045
Crawford's Cocoa Cabanas - 1901 S. Atlantic Ave., Cocoa Beach. 799-0307
Sand Dollar - 1465 S. Atlantic Ave., Cocoa Beach. 783-8628
And finally, here's a link to a list of lots of local lodging. http://cocoabeach.com/lodging.html

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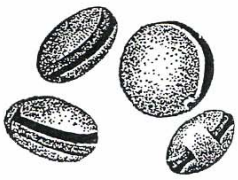
Sea-Bean T-Shirt for 2008

100 % cotton shirt
all shirts are a $20 donation each
T-shirts are available in men's (M—3XL) or ladies' tanks and tees (S—XL).
►available at the **13th Annual Sea-Bean Symposium and Beachcombers' Festival**, Cocoa Beach, Florida◄
(or to order through the mail write to Ed Perry, c/o *The Drifting Seed* newsletter,
P.O. Box 510366 Melbourne Beach, Florida 32951, USA—only while supplies last.
Add $3.00 per item to cover mailing costs, $6.00/overseas, state the size and style of the shirts you desire)
Make checks payable to: The Drifting Seed

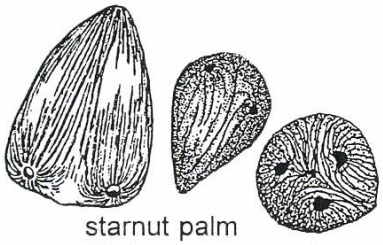
This year's T-shirt again features the artwork of our own Nan Rhodes with her popular sea-bean characters "speed beaning" the beach from their VW microbus, complete with scoop net!

Simple Guide to Common Drift Seeds

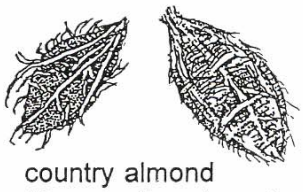
(Illustrations by Cathie Katz and Pamela J. Paradine)



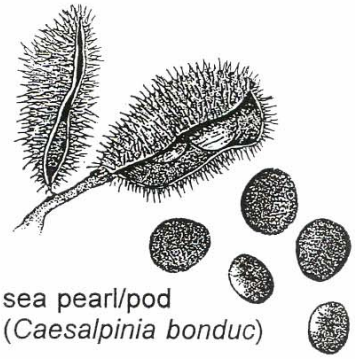
hamburger bean
(*Mucuna* spp.)



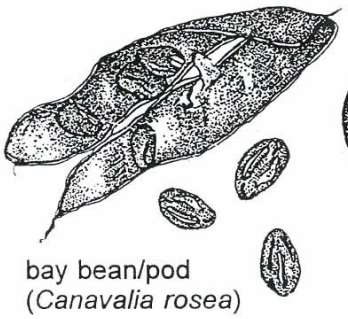
starnut palm
(*Astrocaryum* spp.)



country almond
(*Terminalia catappa*)

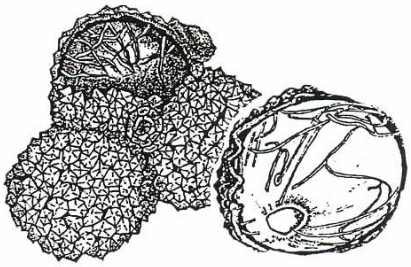


sea pearl/pod
(*Caesalpinia bonduc*)

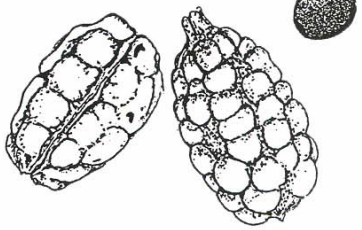


bay bean/pod
(*Canavalia rosea*)

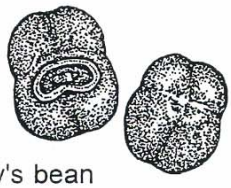
sea heart
(*Entada gigas*)



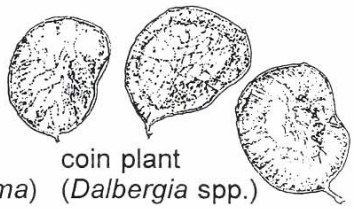
golfball/pod
(*Manicaria saccifera*)



hand grenade
(*Sacoglottis amazonica*)

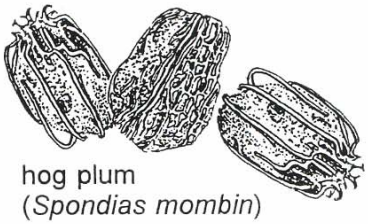


Mary's bean
(*Merremia discoidesperma*)

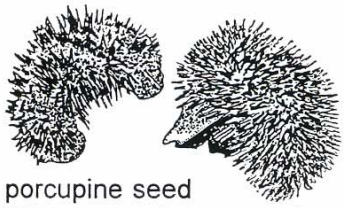


coin plant
(*Dalbergia* spp.)

sea purse
(*Dioclea reflexa*)

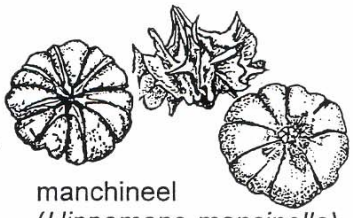


hog plum
(*Spondias mombin*)



porcupine seed
(*Caryocar microcarpum*)

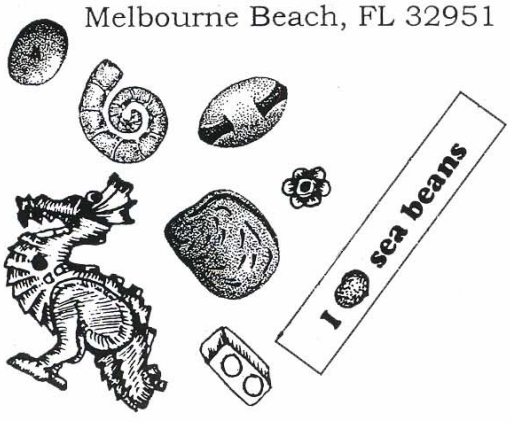
LEGO® toys
(*plasticus legoii*)



manchineel
(*Hippomane mancinella*)

white/black/red mangrove
(various genera)

The Drifting Seed
PO Box 510366
Melbourne Beach, FL 32951



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