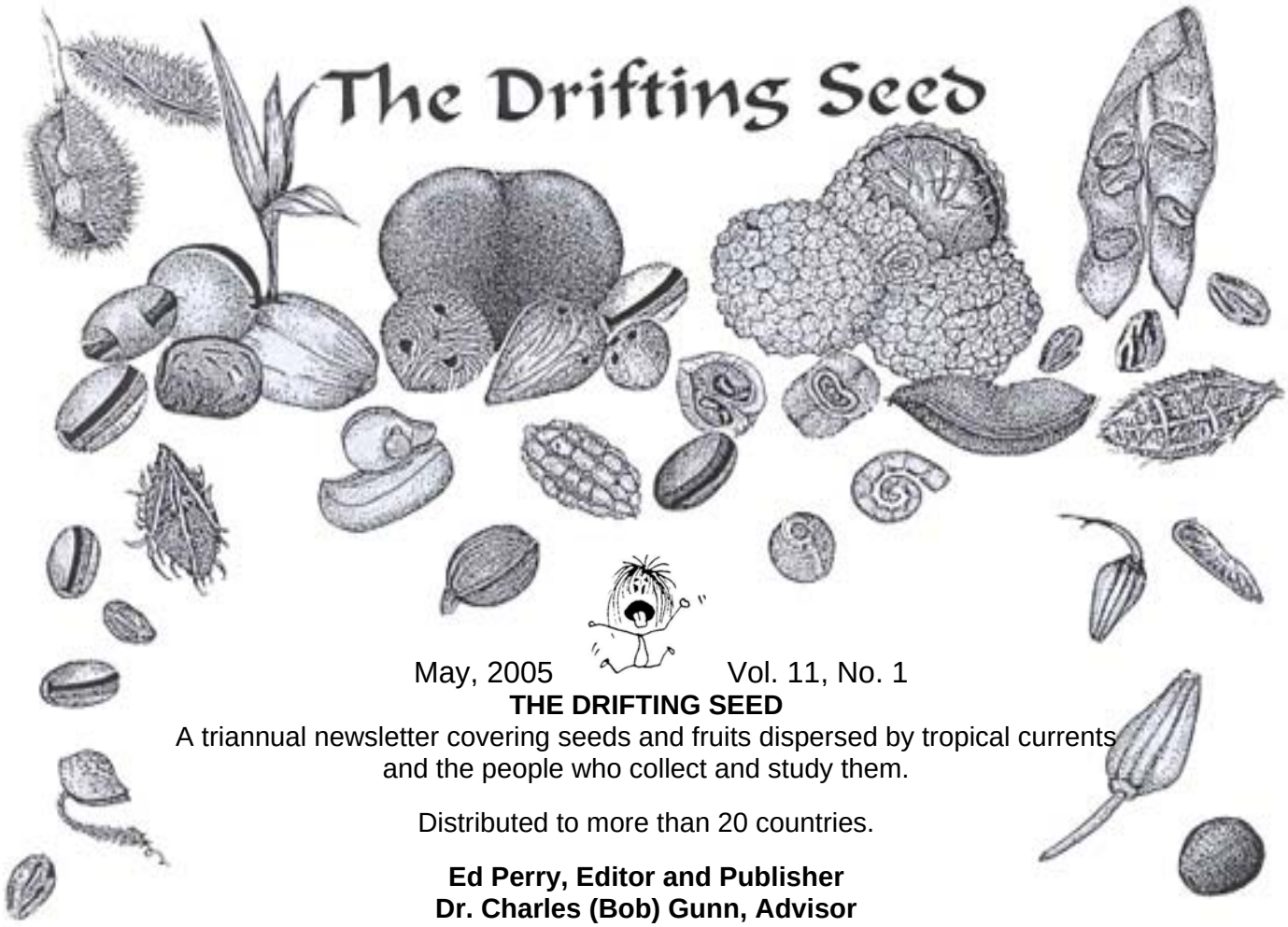

May, 2005 Vol. 11, No. 1

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.

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Patricia Frazier, Production Editor
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Dr. Charles Nelson, Columnist
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The 10th Annual International Sea Bean Symposium will be held at the Cocoa Beach Public Library, October 14th-15th, 2005.

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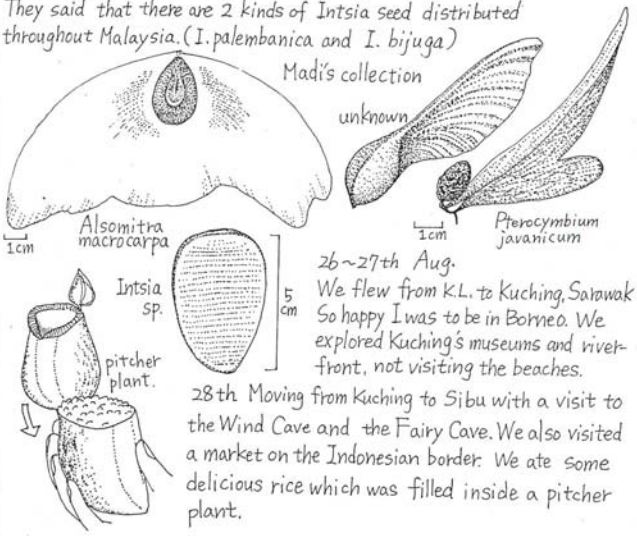
PILIPINAS

To: Mr. Ed Perry
1770 Mason Terrace
Melbourne, FL 32935
U.S.A

Dear Ed
I am now in Palawan island, Philippins. I checked seabean.com. Paul says S.S was GREAT. I am sure about that. I had good time in SABAH instead of S.S. This letter issue is still before SABAH. Borneo was WONDERFUL. I hope that Philippines has many nice beaches for seabean. Of cause I'll report you. Do you think that you can edit this letter as/into Seabean News Letter? If so, it will be great. Seeyou, IZUMI

Travels with Mr. Seabean in BORNEO

23~25th Aug. 2004
After staying in Penang for 2 months we left for Cameron Highlands. This is where I met Madi who showed me his collection from the hills and forests. I found Intsia seed in his collection. Also I went to the forestry office. They said that there are 2 kinds of Intsia seed distributed throughout Malaysia. (I. palembanica and I. bijuga)



26~27th Aug.
We flew from K.L. to Kuching, Sarawak So happy I was to be in Borneo. We explored Kuching's museums and river-front, not visiting the beaches.

28th Moving from Kuching to Sibu with a visit to the Wind Cave and the Fairy Cave. We also visited a market on the Indonesian border. We ate some delicious rice which was filled inside a pitcher plant.

31th Aug. Miri beach 4pm~6pm This beach was quite dirty and in very good condition. This was my first beach in Borneo. A lots of Nypa, Xylocarpus, Hevea. I found several new seeds. Tiny insects bit me. The bites stay longer than mosquito bites..... and so itchy!

Skate of Horse shoe crab
They are more related to the spider than the crab. The span of this one is 32 cm.

fig 1 Blumeodendron sp.
Identified by Brunei museum.
It looks like Heritiera, But it is not.

Some are bigger (left)
Some are smaller (below)

This reminds me of a pig tail. But local call itik-itikan means duckling.

fig 2

Mucuna gigantea
I found only one and this small.

fig 4 Inocarpus edulis

fig 3 Eugeissona minor

fig 5
Teijsmanniodendron pteropodum
Identified by Brunei museum.
Commonly found on the beach.
Dr. Anthony Lamb says that the tree is so beautiful and the flowers are blue in color and so nice.

fig 6 cf. Anisophyllea corneri →
I was given another name by the Forest Research Centre which is Eusideroxylon Zwageri.

fig 7 Eusideroxylon malagangai ↓
Identified by Nicky.

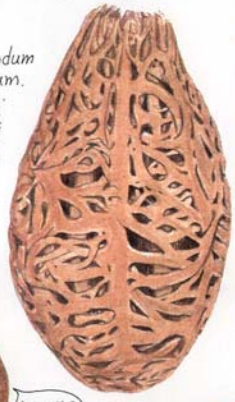


fig 8 cf. Baccaurea sp.
I have another name from the F.R.C which is Scorodocarpus borneensis.
The common name is onion tree. Because when the seed is fresh it smells like onion or garlic.

fig 9 unknown

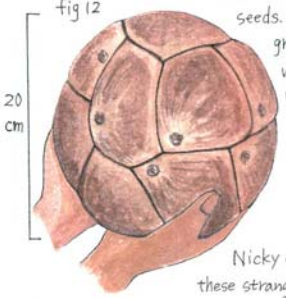
fig 10 unknown

1st Sep. We arrived in Brunei.
Traveling to stay with my friend Nicky, who is a very enthusiastic seed person. While visiting her I discovered her house was filled with beautiful seeds. I sympathize with her style of decorating with seeds. One of her most memorable and fantastic seeds was a completely intact Xylocarpus granatum. Since I had never seen one before. I was struck with awe and wonder. In the past I had found a rind of a Xylocarpus (fig 11) on a beach in Miri. But I didn't know what it was. Then she told me and showed me her perfect specimen. (fig 12)

fig 11

The whole fruit contains 18 irregular seeds. While the fruit was growing it was covered with a thick woody rind which separated into 4 pieces.

fig 12



(left) Dried out and shrunken rind (above)

fig 13

Nicky and I often had seen these strange seeds on the beach (fig 13) But we were not sure what they were. When we were walking on the beach together, we at last figured out what they were. They are the innermost seed of Xylocarpus. Xylocarpus is full of wonder for me. I hope someday soon to see a mother tree fruiting.

2nd Sep. Brunei Muara beach 10am~noon ☼ It is the best beach in Brunei. Nicky warned me about the sand flies on the beach. She said a sand fly bite is 10 times worse than a mosquito bite. Luckily I was not bitten.

fig 14
Barringtonia connoidea

fig 15
Parinari asperula ?

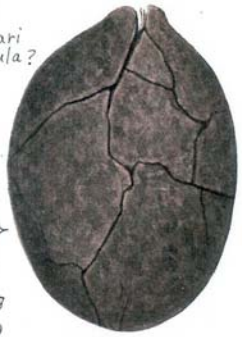


fig 16
Eugeissona sp.
Palmae

looks like a dinosaur egg.

fig 17 Entada sp.

fig 18 Entada sp.

fig 19 Intsia sp.

fig 20 Atuna sp.?

fig 21 Dioclea sp.
Biggest one

fig 22
unknown

fig 23
Excoecaria indica

This contains 3 seeds.

fig 24
Excoecaria sp.

It is more oval than E. indica.

fig 25
Excoecaria sp.

fig 26
Vatica umbonata

fig 27
Cynometra equiselifolia

fig 28
Saraca declinata?

fig 29 Mangifera sp ?
Anacardiaceae
But I think It is Legume.

fig 30 Archidendron sp.

fig 31 Helicia sp.

The 4 most common seeds I found in Miri and Muara were Rhizophora, Nypa, Xylocarpus, and Cerbera odollam. The seeds from these two beaches are overlapping.

※ fig15 Parinari asperula : Previously, I had collected these in the Yaeyama islands, Japan. These were identified differently by the Forest Research Centre in Sepilok, Sabah. Identified as Hydnocarpus sp.

※ fig19 Intsia sp. My hypothesis is that the bigger and thicker one (3.8cm in diameter, 1cm thick) is I. palembanica. And the smaller and thinner one (2.8cm diameter, 7mm thick) is I. bijuga. I saw some herbaliums of Intsia in the Forest Research Centre. The leaf of I. palembanica is bigger than I. bijuga.

6th Sep. We had an appointment at the Brunei Museum and met with Ms. Aziah Binte, who is the co-auther of the book "COMMON SEASHORE LIFE OF BRUNEI". She took us to the specimen's storage room and showed us their drift seeds collection. They have collected 94 kinds of drift seeds. I still have many seeds without names, but I am so grateful to the Brunei museum for their help. It seems it would be easy to collect more than 100 kinds of drift seeds if you lived here for a year. Every time I went to the beaches, I found new seeds. The more new seeds I find, the more devoted I am to seeds.

※ Forest Research Centre in Sepilok, Sabah will be covered in next letter.

Special thanks to Aziah (middle) and Nicky (left)!

Beach Balls
—the European team, and how to make your own balls.

by Dr E. Charles Nelson
Tippitiwitchet Cottage, Hall Road, OUTWELL, Wisbech, Cambridgeshire, PE14 8PE, UK

Balls are not unknown in Europe, and no-one this side of the Atlantic would ever dream of thinking they were "whale burps, barf balls or fur balls" — that seems to be a uniquely American myth! Perhaps we're not imaginative enough, or don't watch *The Simpsons* enough? Add "beach," "sea," "lake" (or "lough" in Ireland; or "loch" in Scotland), as you feel inclined.

There are learned articles on the topic, although they may not be on the infernal Internet. For example, **Dr Peter Foss** in the *Irish Naturalists' Journal* (1985, 21(12): 526–528) reported on a mass stranding of "seaballs" (no space between the words!) in County Donegal in the far northwest of Ireland, that were made up mainly of the roots of marram grass (*Ammophila arenaria*). Ammophila is a dune denizen which assists in binding mobile sand-dunes. Mixed in with this was a lot of other plant material — fragments of green, brown and red algae, small fragment of *Corallina* as well as fibers that were not derived directly from plants, even sheep's wool, nylon threads and other synthetic fibers! These seaballs ranged in size up to 71millimeters in diameter (not quite 3 inches), and when they were ellipsoid, up to 105 millimeters long (almost 4¼ inches).

However, the classic paper on these largely botanical curiosities is that by **John Cannon** published in *Watsonia* (1985, 15: 177–181) entitled *"Seaballs and lakeballs – an old Mediterranean theme with a new Irish variation"*. In fact, in 1984, Mr Cannon had delivered this paper as his presidential address to the *Botanical Society of the British Isles*. Cannon had earlier published a paper *"An experimental investigation of Posidonia balls"* in *Aquatic Biology* (1979, 6: 407–410). Those balls, found in the Mediterranean basin, are principally composed not of the roots of marram grass, but of the strap-shaped leaves of tapeweed (*Posidonia oceanica*), a rather remarkable flowering plant that grows in shallow, salt-water habitats. Cannon even commandeered "our domestic washing machine (*Hotpoint Automatic De Luxe*, 1972)" to make an artificial seaball. He de-constructed a real seaball from southern France, put the fragments of *Posidonia* into the machine and . . . lo, behold, "three washing cycles of ten minutes produced a reasonably compacted ball of 5.0×3.5centimeters (2×1.5 inches)."

Lakeballs are another "species" of this "genus" but with rather different compositions and origins. These are usually formed from semi-aquatic mosses, and have been reported from southern Chile and Tierra del Fuego. The most famous lakeballs are those from Lake Akan, Hokkaido, Japan, which, Cannon noted, have even been featured on a postage stamp, and because of which Lake Akan was declared a "Special Natural Monument."

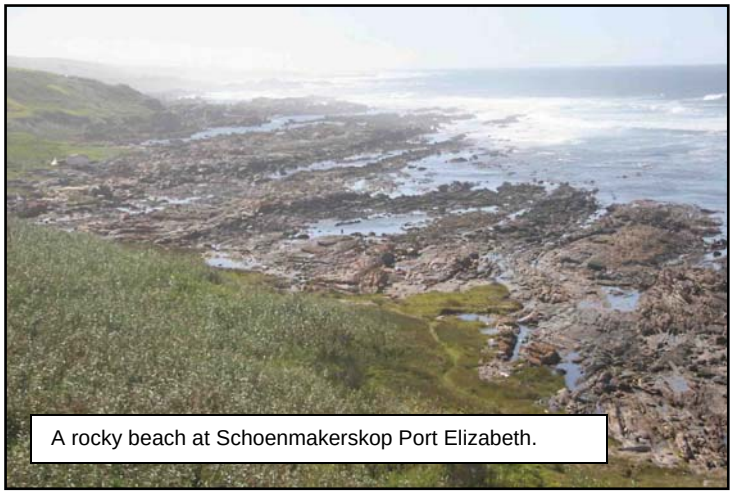
Lakeballs are the oldest on record, having been mentioned in 1588 by the Danish naturalist **Öle Worm —** the same man who corresponded with friends in Iceland about sea beans and eaglestones. Eaglestones were (allegedly) stones that rattled which were (allegedly) found in eagles' nests — they also had alleged therapeutic properties that are similar to those attributed to sea beans. A rattling drift-seed such as *Caesalpinia bonduc* might be "classified" as an eaglestone (by sixteenth century naturalists) since aetites (eaglestones) were known to and described by the ancients.

Regarding American balls, John Cannon noted a mass stranding on Lynn Beach, Massachusetts, in 1903, and an article entitled *"Beachcomber's treasure – a sea ball"* by **Elsie Parry** published in *Natural History* (New York, 1956, 65: 496–497).

Beachcombing In Port Elizabeth—South Africa

by Liliane Hosten-Willems
echosten@yebo.co.za

We live in Port Elizabeth on the Indian Ocean Coast (33º59' S, 25º34' E) of South Africa. My family and I have been beachcombing for many years. Having studied botany at the Stellenbosch University in the Western Cape I have been aware of the magic of drift-seeds for a very long time and as a family we have always raked and looked through the flotsam and jetsam of our beaches. In doing so we have gathered a good representative collection of disseminules which is kept in the **Maria Olivier Herbarium** of the **Nelson Mandela Metropolitan University** (**NMMU**) (formerly University of Port Elizabeth-UPE).



A rocky beach at Schoenmakerskop Port Elizabeth.

The Port Elizabeth beaches are a rich treasure trove of disseminules and we have both rocky and sandy beaches. We find most of the disseminules jammed between the rocks of the beaches or in little sandy coves between rocky ridges. On the sandy beaches one also finds seeds but not as many, I suppose the vigorous breakers bring and take them back and the wind buries the rest in a matter of hours. The oceanic current affecting the movement of waters that carry alien disseminules along the Eastern South African coast is the Western Boundary current of the Equatorial Indian Ocean current that flows southwards down the East African coast. This current is bisected by the Madagascar Islands group and merges together again south of Madagascar from whence it is known as the Agulhas current. From the map it is obvious that disseminules from Madagascar and the Indian Ocean territories can, and indeed do, arrive on our coast. South-westerly winds often cause water movements between the Agulhas current and the coast and in some coves we find material originating both from the east and the west of Port Elizabeth. Most of our material however comes with the Agulhas current.

One of the major problems in connection with drift-seeds has always been their identification. Being exotics, our knowledge of local floras is not of much use. We do of course have the magnificent publication *The Seed-drift of South Africa* by John Muir published in 1937 and its facsimile edition of 2003 with an index of plant names and their current equivalents. *World Guide to Tropical Drift Seeds and Fruits* by Charles R Gunn and John V Dennis gave us new incentives but of course the New World seeds are not ours and so I have kept naming and changing names and never dared to write a report. Things are different now; we have an efficient team of botanist and botanical artist in John and Sandie Burrows. They are young and go and look for the parent plants in Mozambique, the Kwazulu Natal Coast and many other places as well as having been to Kew to straighten up taxonomical conundrums. They have seen my collection and were of great help and encouraged me to prepare this article. In this report I propose to list my most spectacular finds.

We do not have a “seed season” and any time of the year is beachcombing time. We can not predict when there will be a good harvest and sometimes storms bring a lot of material, sometimes not. Our easterly winds are the results of high pressure systems and the westerly winds are pushed by cold fronts from Antarctica.

Because we find most of the disseminules jammed between the rocks of the coast we do not know when they arrived, it could be the previous day or a long time before. Many disseminules we find have been subjected to a long drift on the ocean and are incrusted with tube worms and other organisms. Distances are long: Port Elizabeth -Maputo 1261km; Port Elizabeth- Madagascar 2111km and many disseminules come from places even further away.
You will notice that I use different terms for the material collected. I like the term disseminule because we find fruits, logs, bamboos, branches, seaweeds and having been trained as a botanist a seed is a seed and they are contained in a fruit.

On Christmas day in 2004 we went with the Burrows to the rocks of a Port Elizabeth rocky beach. It was a magnificent peaceful outing but had we been there the next day we would perhaps have been in trouble. About 12 hours after the tragedy of the Tsunami in Indonesia we had, here in Port Elizabeth, 8.000 km away, a powerful withdrawal and surge of water. Swimmers and surfers had to be rescued and at least one person drowned. This shows how fast energy is transmitted through the oceans and how powerful the force is to rip off and carry away coastal materials.

In the list I use the terms local, non-local and alien referring to disseminules found on the Port Elizabeth beaches. Those terms are borrowed from Muir. Local means the parent plants occur in the Port Elizabeth area; non-local are plants not represented in or around Port Elizabeth but occur in South Africa; aliens come from outside our borders e.g. Mozambique, Madagascar, East Africa and who knows where. P.E. is the abbreviation for Port Elizabeth.

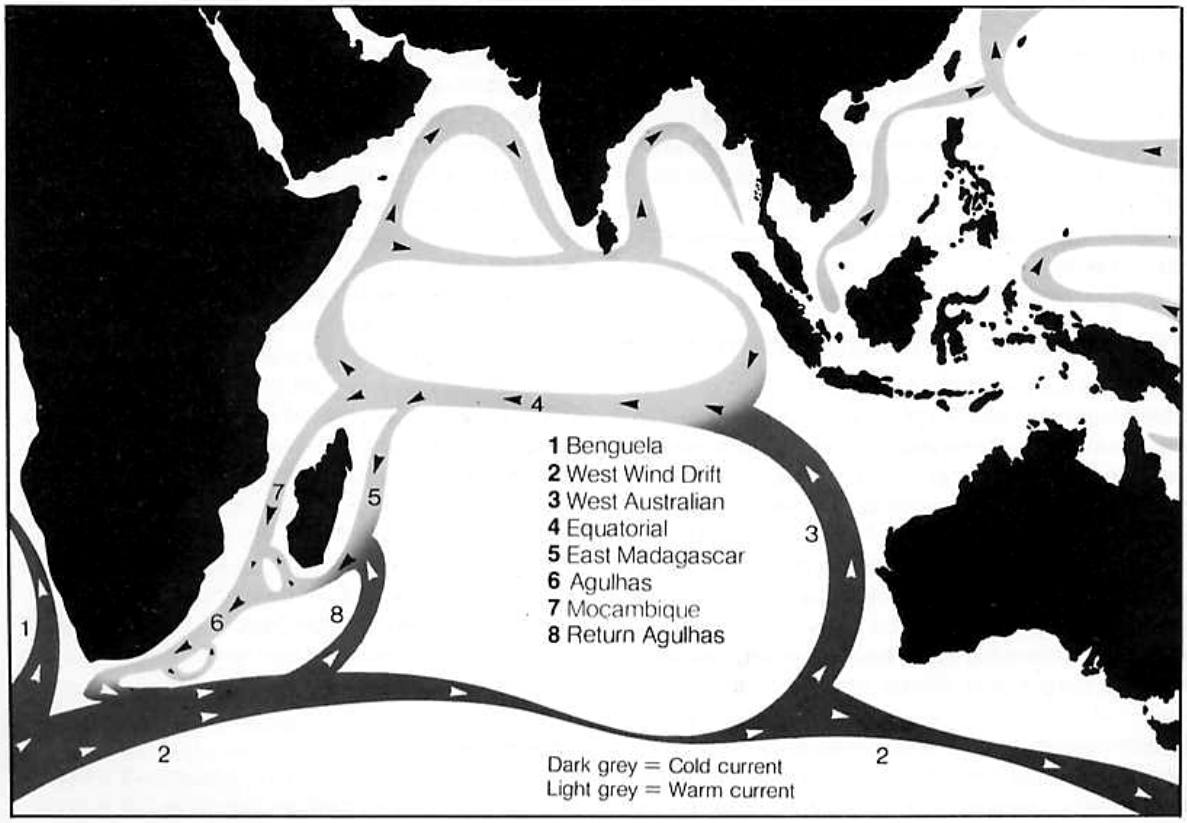


Figure 1. Currents of the Indian Ocean. Reproduced with permission from the Oceanographic Research Institute, Durban.

Disseminule collection in the herbarium of the NMMU
January 2005

Acacia cyclops and *Acacia longifolia* Fabaceae. Rooikrans and long-leaved wattles, two invaders introduced from Australia to stabilize sandy coastal areas. Seeds and pods from local populations near the parent plants. Local. P.E.

Afrocarpus falcatus (Podocarpus falcatus) Podocarpaceae. Outeniqua yellowwood, seed kernels of one of our few indigenous Gymnosperms. Local. P.E.

Aleurites moluccana Euphorbiaceae. Candlenut, only 3 so far. Alien. P.E.

Barringtonia racemosa Lecythidaceae. Powder-puff tree growing in estuaries and swamp forests. Fruit fibrous. Common. Non-local. P.E.

Barringtonia asiatica Lecythidaceae. Box fruit, always an exiting find, some are big and shiny, others are heavily corroded pointing to a long sea voyage. Alien. P.E.

Bruguiera gymnorhiza Rhizophoraceae. Black mangrove, usually only found in the vicinity of parent plants.

Caesalpinia bonduc Fabaceae. Grey nicker nut. Common. Non-local. P.E.

Calophyllum inophyllum Clusiaceae. Laurelwood. Alien. P.E.

Canavalia rosea Fabaceae. Alien. P.E.

Cassuarina spp. Cassuarinaceae. Beefwood. Street trees, conelike aggregate fruits on city beaches. Local, not indigenous. P.E.

Cocos nucifera Arecaceae. Coconut. Coconuts arrive in different conditions, some with the fibrous husk, some with the husk eroded, all showing signs of a long sea voyage. Alien. P.E.

Corylus sp. Corylaceae. Hazel nut- only 1found in December when Christmas cakes are baked, probably local garbage. P.E.

Cryptocarya latifolia Lauraceae. Common. Non-local. P.E.

Derris trifoliata Fabaceae. Pods, rare.

Dioclea Fabaceae. A difficult group identified with the help of J. Burrows:

Dioclea hexandra. Saddle-shaped, brown, unspotted. P.E.

Dioclea wilsonii. Saddle-shaped, spotted. P.E.

Encephalartos spp. Zamiaceae. Cycad seed-drifters not fertile, only very light hollow shells found. Local or non-local. P.E.

Entada: Fabaceae. There has been much confusion about the identification of *Entada* seeds. Izumi Hanno's sketches are of the greatest help (The Drifting Seed, May 2003).

Entada koshunesis identified according sketches from Izumi Hanno and material sent from Japan. Alien. P.E.

Entada gigas(?) sea heart. Alien. P.E.

Entada phaseoloides. Alien. P.E.

Entada rheedei the most commonly found. This is what we call a sea-bean in S.A. Non-local. P.E.

Gigasyphon macrosyphon Fabaceae. Perhaps a first record from a S.A. coast. Id J. Burrows. Alien. P.E.

Grevillea robusta Proteaceae. Australian trees planted along streets. Local. P.E.

Hakea sericea Proteaceae. A terrible invader from Australia, does not germinate on the beaches. Local. P.E.

Heritiera littoralis Sterculiaceae. Alien. P.E.

Hibiscus tiliaceus Malvaceae. Wild cotton tree.

Hyphaene pertersiana Arecaceae. Real fan palm, only 1 found. Non-local. P.E.

Intsia bijuga Fabaceae. Alien. P.E.

Ipomoea pes-caprae Convolvulaceae. Strandpatat, fruits and seeds found near plants. Local. P.E.

Jubaeopsis caffra Arecaceae. Pondo palm. Rare species restricted to sandstone cliffs of 2 small river valleys on the Eastern Cape coast. Non-local. P.E.

Manguifera indica Anacardiaceae. Mangoes, local garbage. P.E.

Mimusops caffra Sapotaceae. Coastal Red milkwood, fruits and seeds found near parent plants. Non-local.

Mucuna gigantea Fabaceae. Seeds extremely variable, fairly common. Non-local. P.E.

Mucuna paniculata Fabaceae. Origin Madagascar. Id J. Burrows. Only 1 found so far. Alien. P.E.

Opuntia ficus-indica Cactaceae. After severe river floods beaches are occasionally covered by *Opuntia* pads, luckily they disappear after a short time and don't spread on the beaches or dunes nor do they leave nasty thorns. A noxious invader from our adjacent dry regions. P.E.

Rhizophora mucronata Rhizophoraceae. Red mangrove found in vicinity of parent plants only.

Scaevola plumieri Goodeniaceae. Seeplakkie, fruits found in vicinity of plants. Local.

Schotia latifolia Fabaceae. Forest boer-bean. Whole woody pod. Local. P.E.

Sclerocarya birrea subsp *caffra.* Anacardiaceae. Marula, stones of the fruit, only 2 so far. Non-local. P.E.

Telfairia pedata brought by a visitor to the NMMU Herbarium. Collected in East London or Port Alfred. Only one.

Terminalia catappa Combretaceae. Indian almond. Alien.

Trapa natans Trapaceae

Widdringtonia most probably *W. nodiflora* Cupressaceae. Branches and cones after a river flood. Another of our few Gymnospermae. Local. P.E.

Xanthium strumarium Asteraceae. Large cockle bur, cosmopolitan weed.

Xylocarpus granatum and *Xylocarpus moluccensis* Meliaceae. Mangrove mahogany. Mostly empty fruit shells encrusted with calcareous worms. Alien. P.E.

Photo 1. Left to right, top row: *Entada rheedei. Entada koshunesis, Entada ?, Entada phaseoloides*; bottom row: *Dioclea hexandra, Dioclea wilsonii, Mucuna paniculata, Mucuna gigantea.*

Photo 2. Left to right, top row: *Schotia latifilolia pod, Calophyllum inophyllum, Sclerocarya birrea*; middle row: E*ncephalartos sp., Intsia bijuga*; bottom row: *Caesalpinia bonduc,* ? (Port Alfred Feb 2005)*, Afrocarpus falcatus*.

Photo 3. Left to right, top row: *Barringtonia racemosa, Heritiera littoralis, Hyphaene petersiana*; bottom row: *Terminalia catappa, Telfairia pedata, Jubaeopsis caffra.*

The Godzilla *Entada*
Aka: The Big Bean
by Dr. Jerry Sullivan

Emma Longhorn, a dedicated seabeaner on the Pacific Coast of Japan, was recently contacted by Ms. Aya Shinosaki, who a few years ago found a gigantic *Entada* on a beach on Okinawa and is willing to share it with the "World of Drifters." Emma convinced the finder not only to submit the Godzilla *Entada* for size authentication in good-old-Texas, but also to display it at the University of Texas Marine Science Institute in Port Aransas, Texas, for a period of six months. Wow! Jolly-good-show, Em! (That's United Kingdom jargon, not Texas palaver.)

Ms. Shinosaki's giant-of-giants has arrived and it is truly a Godzilla, weighing 2.1 ounces and measuring a mere 71 mm in height by 61 mm in width for a grand total size (value) of 9,095. This Big Bean usurps the throne from King Richard of Canada (Drifter Richard Buckman) whose seaheart ruled supreme for a moderate period of time with a size of 7,604.


Fay Rice and Dick Vernon.

A number of individuals played a role in establishing this new sovereignty: Ms. Shinozaki discovered it; Emma was the coordinator-extraordinaire; Mr. Takashi Fikias was the official photographer (see-http://homepage3.nifty.com/hataoto\newpage35.htm); Mr. Tamayose, a reporter from the Okinawa Times, and it would not be surprising if Ms. Izumi Hanno was involved somewhere.

The newly anointed "King of *Entadas"* is probably *E. phaseoloides* since its distribution is from the tropical currents in southeast Asia and the Pacific region. According to Gunn and Dennis "either *E. phaseoloides* gave rise to *E. gigas* or both had a common ancestor and their seeds are similar, while some seeds of the two species cannot be separated."


Ava Shinosaki

It is believed that this newly crowned King will reign for a very long period of time, perhaps an eternity.

"The King is dead, long live the Entadazilla!"

THE QUEEN OF HEARTS

The newest ascender to the throne of the Queen of Seahearts was indeed small enough to topple the "Royalty from Texas Shores". In fact, it is considerably tinier than its predecessor, weighing 0.207 ounces with a width of 30 mm and a height of 28 mm. The calculated size (value) of 174 is far less than the 266 for the plump dethroned Texas Queen.

The new "Queen of Hearts" was discovered by a retired pharmacist/owner Dick Vernon, a native of the Key Biscayne area in October, 2004, in Bill Baggs State Park on Key Biscayne. During a "senior moment," Dick transferred ownership of this miniature seaheart to Ms. Fay Rice to add to her expanding collection of drift seeds.

Fay is an exuberant first year novice drifter, who has barely gotten her feet wet, yet has accumulated approximately fifty different stranded seeds. Formerly an elementary school teacher in New York, she now directs her energies to seabeaning, church activities, jewelry making and was recently the winner of Margie Mitchell's quilt raffle at the symposium. Perhaps you've met.

I find I have a few things in common with these two seabeaners. With Dick, I too found the world's smallest seaheart, and am still a licensed "pill-pusher"* in the state of Washington; whereas Fay's teaching coincides with my teaching of pharmacy, jewelry creations and as a three-year novice drifter.

It is speculated that the reign of this newest seaheart will be relatively short, because one of those fabled *Entadas* which fit within the circumference of a U.S. quarter or nickel will soon be washed ashore or surface from a drifter's cache.

"The Queen is dead, long live the Queen!"

One thing that I've learned is that seabeaners really value their favorite seabean(s) and really don't like putting them on loan. Therefore, in the future, these seeds will be authenticated, photographed and returned to their owners. In their place, in the display case will be its photograph and recognition to its finder. Thanks to Ed Perry, Richard Buckman, Aya Shinosake and Fay Rice for allowing UTMSI to display their seahearts.

*slang for pharmacist.

Books & Movies

by Curtis C. Ebbesmeyer

The Red Cedar of Afognak — A Driftwood Journey, 2004, Copyright: *Native Village of Afognak*, 28 pp. The title page portends the book's greatness: produced by the ***Native Village of Afognak****;* based on a story by Afognak Elder ***John P. Pestrikoff*** about a giant floating log; written by English Professor ***Alisha S. Drabek*** and anthropologist ***Karen R. Adams****;* and illustrated by Alutiiq artist ***Gloria N. Selby****.*

Classic children's books blend factual content with the power to enthrall those of all ages. *Paddle-to-the Sea* by **Holling Clancy Holling** (1941; reissued in 1991) comes to mind, the story of a young boy's carving — a wooden Indian in a wooden canoe — which drifts through the Great Lakes, down the Saint Lawrence River and across the North Atlantic Ocean. With fine illustrations, *The Red Cedar of Afognak* continues in that tradition.

From native storyteller *Apaa* (grandfather), we learn the Alutiiq alphabet and words to accompany maps, currents, driftwood, native tradition, and the ways of nature. Numerous sidebars — Alutiiq traditions, tree rings, sea otters, yellow ducks, layers in an archaeological dig, tsunamis — contain a wealth of information which will appeal to children and experts of all nationalities. The references open doors to a rich, multi disciplinary literature.

10 Little Rubber Ducks by **Eric Carle** (2005; Harper Collins Publishers; ISBN 0-06-074075-2; $19.99 in the U.S.; $25.99 in Canada). Inspired by a 2003 newspaper clipping, Eric Carle tells youngsters of the bathtub toys which fell overboard in the middle of the North Pacific Ocean. Thirteen years after the loss in January 1992, the actual toys — 29,000 plastic turtles, ducks, beavers, frogs — have by now drifted around the North Pacific, Arctic and North Atlantic oceans.

An earlier clipping inspired **Eve Bunting** and **David Wisniewski** to create *Ducky* (Clarion, 1997), the first children's book about the cargo loss. The inspiring news items stemmed from the initial scientific report of the floating critters by Curt Ebbesmeyer and Jim Ingraham (*1994, Pacific Toy Spill Fuels Ocean Current Pathways Research, EOS, Transactions, American Geophysical Union 75*

(37): 425-432). Since then, thousands of media publications in many languages have spread word of the toy spill.

From these two books, young children learn the basic elements of the sea story: toys made in a factory across the sea, a storm which knocks them overboard in a steel box from a container ship, the toys escape from the container to float in all directions about the global ocean, and, as kids often ask me in class: *"Aren't the ducks just trash?"*

I hope these books will spawn generations of oceanographers like the 1950s TV programs of scuba diving — *Sea Hunt*, *Underseas Adventures of Cousteau* — inspired me to pursue a career in oceanography.

Our Synthetic Sea won first place in the *Oceans, Water Quality & Watersheds* category in the *EarthVision Environmental Film Festival*, October 27-30, 2004, Santa Cruz, California. This incredibly beautiful film takes you on a voyage with **Captain Charles Moore** into the Pacific Ocean in search of floating plastic.

Plastic marine debris alarms all who love the sea. It is not biodegradable. Sunlight, waves and aging merely fracture the plastic into ever smaller pieces which remain afloat but, by their minuscule size, vanish from sight. The plastic recovered in beach cleanups is merely the tip of the iceberg.

In *Our Synthetic Sea*, aboard his personal research trimaran Captain Moore trawls the Pacific for the pieces of floating plastic sieved with fine mesh screens. And yet, this is still the tip of the iceberg, for trillions and trillions of much smaller shards remain below the detecting of environmental monitoring apparatus. For his pioneering work, Captain Moore has won many prestigious awards including, most recently, the *John M. Olguin Marine Environment Award*.
This is a must-see film. View excerpts at producer **Bill Macdonald's** website *www.macdonaldproductions.com*. Order from *www.algalita.org*.

Flip Flotsam (2004, UK, documentary, 26 minutes). Filmmakers **Etienne Oliff** and **Lucy Bateman** document the life cycle of flip-flops produced in Kenya from production into the ocean and back again. The flip-flop is the most popular footwear in Africa. Factories in Mombasa produce them, cobblers rejuvenate them, and when beyond repair, artists recycle them into toys and mobiles for sale back in Mombasa.

African coastal currents will carry fugitive flip-flops south around the Cape of Good Hope into the Atlantic Ocean. Be the first to report these colorful footwear in the Americas.

Oriental Glass Fishing Floats. Walt Pich, 2004. *Glass Ball*, a comprehensive guide to oriental glass fishing floats found on Pacific beaches. Published by *Walt C. Pich Publishing*, Ocean Shores, Washington. 160 pages with many photos plus a guide to glass blower marks. Direct inquiries to Walt via email at *floatcomber@aol.com*.

Glass Ball is a comprehensive guide to assist beachcombers and glass ball collectors in identifying Oriental glass fishing floats. Included with the text are 335 photos and illustrations identifying origin and history. 235 glass blower marks are identified and explained.

Glass balls are the jewels of the Pacific. Though their number has diminished over the years, beachcombers still find tens of thousands annually around the North Pacific Ocean. The currents carried unknown numbers from the North Pacific to the ends of the earth.

Walt presents beachcombers with results distilled from years of painstaking research. Beachcombers worldwide should compare their finds with the numerous photos and glass blower marks.

Glass Floats of the World (2nd edition), The Collector's Identification and Price Guide Handbook by **Stuart Farnsworth** and **Alan Rammer** will be available in April 2005. **Ordering:** Retail $20. Consult www.glassfishingfloats.com.

"With the continually increasing popularity of collecting glass fishing floats and so much uncertainty as to their value," reads the book's back cover, *" this updated and expanded edition includes a new section on Japanese markings, a larger sampling of European markings, an introduction and history to a line of American-made glass floats previously thought to be for many years European or Japanese in origin, and the most current prices for these highly sought treasures from the world's seas."*

***The Wrecking Season*.** Boatshed Films, 2005. DVD, color, ~60 minutes, music composed and performed by **Paul Berrington** and **Jimmy Green**. Director: **Jane Darke**. Narrator: **Nick Darke**. They have given us an important and profound film which should be shown worldwide at all coastal interpretive centers. It's a must for anyone visiting any shore. **Ordering copies:** Consult *www.thewreckingseason.com* for American and European versions of the DVD. Estimated cost: $24 US (online payment will be available).

Follow writer, playwright, fisherman and wrecker Nick Darke as he answers three questions — What is it? Where's it from? What's it doing on the ocean? — concerning transatlantic flotsam, including lobster pot tags, rare wood, fishing gear, sea beans, stranded animals, messages in bottles, light sticks from long line fishing, nurdles, doll parts, oil spills, and a plywood sign from a bridge washed out in Newfoundland, Canada.

Nick distinguishes wrecking from beachcombing. A wrecker finds everything on the beach fascinating and useful, whereas a beachcomber usually specializes in collecting specific objects such as sea glass, sea beans, or glass fishing floats.

Most flotsam collects along restricted fractions of the ocean shoreline. Now, for the first time, there's a film concerning debris stranded along one such location. Cornwall, jutting out into the North Atlantic Ocean from southwest UK, snags all manner of debris from the global conveyor belt of currents. Through the ages, Cornish coastal communities utilized this long-haul driftage in everyday life. In the 1800s, for example, finding one wooden plank equaled a day's wages.

A fourth generation Cornish wrecker, Nick is ideally qualified to host this landmark film, one that is both informative to the veteran, as well as beautiful and educational for the beginning wrecker and beachcomber. Meet Nick's friends and fellow wreckers, including **Stella Turk** (stranded animals), **Ed Schliffke** (messages in bottles), **Richard Crow** (drift wood identification), and **Gerald Brenton**, **Warwick Cowling**, and **Paul Gainey** (veteran wreckers).

Tropical Drift Seeds on the Netherlands Coast by **Christophe J. E. Brochard** and **Gerhard C. Cadée**, 2005. *Tropische drijfzaden van de Nederlandse kust* in: *Tabellenserie Strandwerkgemeenschap*, Nieuwegein, No. 30, January 2005, Netherlands. Price is about $10 (exclusive of postage). Published by a non-profit organization; 66 pages including 16 plates with drawings by **C.E. Brochard**, a hundred-plus references, and an index. **To order:** email editor **Jappe Beekman** (Jappebeekman@hotmail.com), or write Gerhard C. Cadée, Royal Netherlands Institute for Sea Research, P.O. Box 59, 1790 AB Den Burg, Texel, Netherlands (cadee@nioz.nl).

Tropical drift seeds are rare in the Netherlands. Until now, only two species of *Mucuna* (17 specimens; resemble miniature hamburgers), *Entada gigas* (9; sea hearts), *Caesalpinia bonduc* (4; sea pearls), *Manicaria saccifera* (2; sea coconuts), *Terminalia catappa* (2; sea almonds) and *Dioclea reflexa* (1; sea purse), have been recognized as tropical drift seeds which reached the Dutch coast via the Gulf Stream and the North Atlantic Drift. The numbers now total 35, almost half (17) of which are *Mucuna* beans. Visit *www.seabean.com* for photos of these seeds.

The Dutch coast cannot boast a long history of sea-bean finds. The first seed, a *Mucuna*, was found in 1955 on Schiermonnikoog by **Wim Vader**, followed by a *Entada* in 1956 at Zandvoort by **Cathie Katz**, The Sea Bean Lady of Florida. Many ships passing Holland to and from Rotterdam,

Amsterdam, Antwerp, and Hamburg afford opportunities for numerous seeds and fruits to be lost during transshipping or thrown overboard. Furthermore, many typical tropical drift seeds which now can be bought in Dutch flower- and souvenir shops, offer another possibility to enrich the drift on our shores.

This booklet describes man-introduced seeds and fruits, as well as the transatlantic seeds. The authors also include some temperate seeds which at first sight might be taken as tropical. For those unable to read Dutch, the drawings clarify the variety of material found along Dutch coasts.

News and Notes

We recently met up with Nancy Suthann. Nancy first met Cathie Katz at Symposium 2000 and approached her with a polished sea heart she had found on a Brevard County beach. It was a sea heart Cathie had thrown back to the ocean! Nancy and Cathie became friends and felt like kindred spirits. Before she even knew much about sea-beans, Nancy found a beautiful Cathie's bean (before it was named). It now adorns a keychain she carries with her at all times. Nancy can be reached at cbeanflss@aol.com.

From **Alice Surrency**: **Hurricane preparedness for your sea-bean jewelry**. Throughout the year save all the small silica gel desiccant packs you can; they come in many pre-packaged products. Before the hurricane and impending power-outages followed by hot, high-humidity days, place all your sea-bean jewelry in an air-tight container with desiccant packets. After last year's hurricanes in Florida, many sea-bean enthusiasts found their jewelry beginning to sprout or discolor from taking on water and humidity!

Pictured left is the **Heartnut**, *Juglans ailanthifolia* or *Juglans sieboldiana var. cordiformis* (used interchangeably). The one on the left is from Izumi Hanno, and found in Japan, the one on the right was found by a friend of Drifter Alan Rammer's in Ocean City, Washington on March 6th, 2005.

Flora Celtica is the title of a recently published book about plants and people in Scotland. It is a splendid, hefty volume, beautifully illustrated with extraordinary color photographs of Scottish native wild plants. My purpose in bringing it to the attention of readers of *The Drifting Seed* is entirely due to one of the occasional old black-and-white photographs that are also reproduced. On p. 170 is a picture taken in 1937 on the Hebridean island of South Uist, and it is captioned "Mary's bean snuff box ..." The subject is a none-too-young, grey-haired woman, wearing a highly patterned pinafore apron, apparently about to eat a large seed – she is holding the seed in her right hand very close to her opening mouth. There can be no doubt from the relative scales of finger, thumb and seed, that the seed is *Entada gigas*, sea-heart, and not the much rarer, much smaller, and much more renowned Mary's bean, *Merremia discoidesperma*. That is not a criticism, merely a correction of its identity – and it may well be that she told the photographer that it was a "Mary's bean."

The seed appears to be intact – there is *no* indication that it has been converted to carry snuff – for more on this topic, I refer readers back to my article 'Sea beans as vesta boxes and snuff boxes' in *The Drifting Seed* 4 (2): 9–10 September 1998). Examples of *Entada gigas* converted into snuff containers do exist in at least one Scottish museum (illustrated in my paper 'Tropical drift fruits and seeds on coasts in the British Isles and western Europe II: history (1560–c.1860) and folk-lore' published in *The Scottish naturalist 1983*: 11–63).

The woman's left hand is cupped, but what she is holding in it cannot be seen – maybe there was indeed a Mary's bean in her palm.

The photograph is rather astonishing – I wish I had known about it earlier! – simply because it actually shows a *real* person with a *real* drift seed. This one may have been an heirloom for generations.

Incidentally, *Flora Celtica* is a bountiful delight – anyone of Scottish origin with botanical interests should certainly acquire or conspire to borrow a copy. At £30 (approx. US$60) it is an absolute bargain! (W. Milliken & S. Bridgewater, 2004. *Flora Celtica. Plants and people in Scotland*. Edinburgh: Birlinn. ISBN 1-84158-3-3-0. £30. For more information see www.birlinn.co.uk). E. Charles Nelson.

Debbie and Ricky.

From Drifter **Debbie Harper** in Alabama:

Hi Ed, Hope you are well. Did I every thank you for my polished seabeans you sent? If not, please forgive me and thank you so much. John and I went to Roatan Island off Honduras a couple of weeks ago and wanted to report my seabean finds! I only got to go looking one day. I met a couple from California and got them hooked on seabeans too. They were going on the Belize Ambergris Island and found more but I haven't heard how many more yet. They have the seabean fever for sure thanks to me, ha ha..... I told them to go to seabean.com and check it out and to be sure and order your book.....

Here's the list.....

Debbie- 13 Seahearts
14 Hamburgers
6 Sea purses
4 starnut palms
3 antidote vines
2 MARY'S BEANS!

Lots of seeds, some I don't know yet what they are.

Cliff and Sandee from California.

Cliff Hall from Grass Valley, California - 6 Hamburgers
2 Seahearts
2 Sea Purses
1 Starnut palm

Sandee Middaugh, Grass Valley, Calif. 1 Seaheart
8 Hamburgers
1 Antidote Vine

Have a great Easter Weekend! BTW, bad photo of me attached but good one of Ricky!—Debbie

Drifter Fay Rice has done it and found another baobab seed on a Florida beach, this time in South Florida at Cape Florida State Park. Her small, hard, curled seed was found in April and closely matches the one found by Ed Perry back in 2000. Her seed appears to be *Adansonia digitata*, and may have originated from exotic plantings in Miami, or perhaps floated from as far away as Africa.