

How I Organize and Care for My Shell Collection



by:
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Waayers

How My Shell Collecting Started...

Eastern Seaboard: 1973 - 1977



Wikimedia Commons

Ocean City, Maryland



Above (both): Wikimedia Commons

How My Shell Collecting Started...

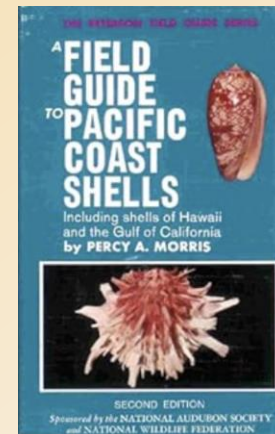
S. California: 1977 onward



Wikimedia Commons



Robyn in one of her favorite places (the beach)



2014:

“Got Serious”!

What this talk is about....

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What this talk is about....

- How I maintain my *OWN* collection!
- Not necessarily how others might maintain theirs
- It is meant to give ideas about CERTAIN ways that a shell collection might be maintained (not be one-size-fits-all guide for all shell collectors)

The Big Picture: Benefits of Organizing and Maintaining a Shell Collection

Specimens can be viewed more readily



The Big Picture: Benefits of Organizing and Maintaining a Shell Collection

Specimens can be appreciated as taxonomic groups



Fissurellidae

VS



Nacellidae

The Big Picture: Benefits of Organizing and Maintaining a Shell Collection

Specimens can be better protected (from light, shock, etc.)



The Big Picture: Benefits of Organizing and Maintaining a Shell Collection

Specific specimens can be found quickly



What to Store Them In??



Wikimedia Commons, Jose Carioca

My Inspiration (after 14 years of intense insect collecting)



Cornell Drawers



- Glass-topped
- Wood (pine)
- Keep pests out
- Drawer pull with slot for label

Dimensions (inches):

Outer: 19 X 16.5 X 3

Inner: 17.75 X 15.25 X 2.375

Cornell Cabinets



Come in a variety of styles and materials, and can be open-fronted or closed by a door

Cornell Unit Trays



Come in a variety of sizes, and can be “merged” to create new sizes.
Note “pad” on lower right corner to raise level in tray.

How I Use Trays for Shells

Synthetic
“cushion”
material –
thickness can
be adjusted



(can purchase
at fabric store)



Data label
(kept
underneath
felt)

Species name label

Synthetic Black Felt



(can purchase
at fabric
stores)

Support for “rounded” shells



Data Labeling System

A “good” label:

Specimen
number
(more about
this soon...)

Family

#3

BULLIDAE

Bulla gouldiana Pilsbry

Species and
author (I choose
not to include
the date
described – a
personal choice)

Ski Beach, Vacation Isle,
Mission Bay, San Diego,
California, USA

32.775907, -117.232922

empty on beach at low tide

29 Jan 2015

Date collected

Coll: R. J. Waayers

Name of collector

Detailed Location

Additional and/or
“ecological” information

Data Labeling System

How to make archival:

#3
BULLIDAE
Bulla gouldiana Pilsbry
Ski Beach, Vacation Isle,
Mission Bay, San Diego,
California, USA
32.775907, -117.232922
empty on beach at low tide
29 Jan 2015
Coll: R. J. Waayers

Acid-free card stock



Toner (not liquid ink)

Data Labeling System

Ideally: A second more organized, legible and archival label could be made and kept with original label

Diodora
inaequalis Soubg

N. of San Carlos Bay

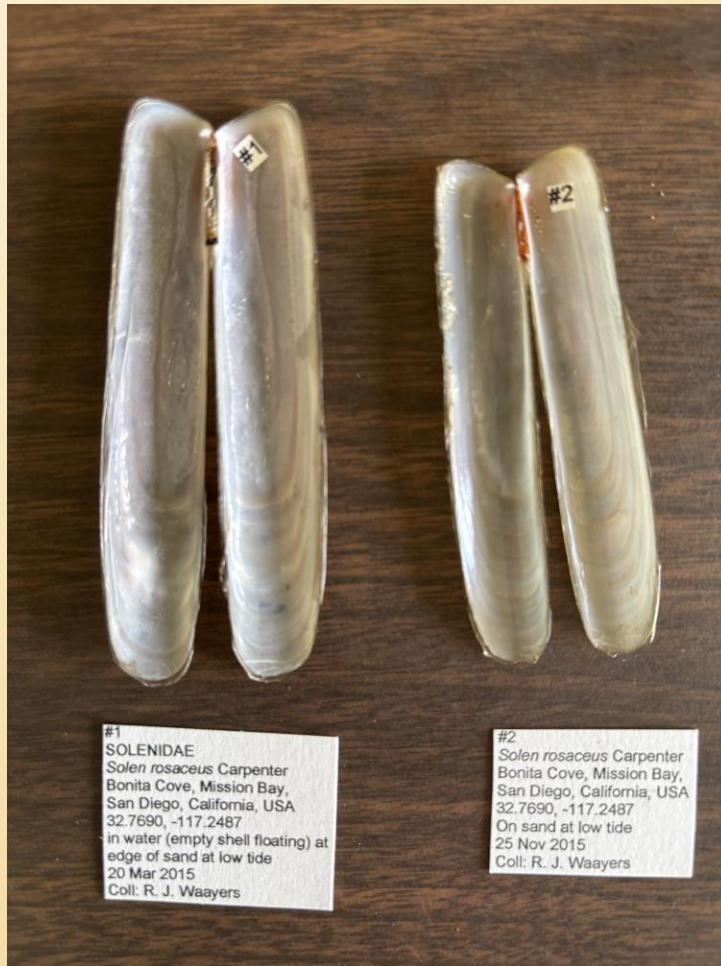
Truany was

MICHEL'S COLLECTION

purchased	tracking	mangrove	seaweeds
exchanged	fixed	beach	shell residue
collected	buried	thin sand	brackish water
<u>5/6%</u>	under	sand	up high tide
alive	in holes	gravel	between tides
handling	at night	stones	down low tide
dredging	___ m. down	rocks	<u> </u>
trawling	___ m. deep	mud	very common
diving		corals	rare abundant
Misc. _____		rubble	

Data Labeling System

How I keep track of specimens within one (species-specific) unit tray:



Drawer Labeling System

Drawer Labels: Acid-free card stock – I color-code, based on groups I'm interested in

Usually something like this:



Drawer Labeling System

Overall organizational scheme (for my collection):



Green:

Worldwide mollusks not in "yellow" category

Warning sign about not pulling drawers all the way out!

Yellow:

Mollusks From Alaska to W. Mexico

Drawer Order: “Somewhat” phylogenetic (following the evolutionary patterns)



Benefits and Drawbacks to This Drawer System



Benefits and Drawbacks to This Drawer System



Benefits:

- Easy to view shells
- Aesthetically pleasing
- Easy to add new shells
- Protected from light
- Somewhat protected from shock (earthquake, etc.)

Benefits and Drawbacks to This Drawer System



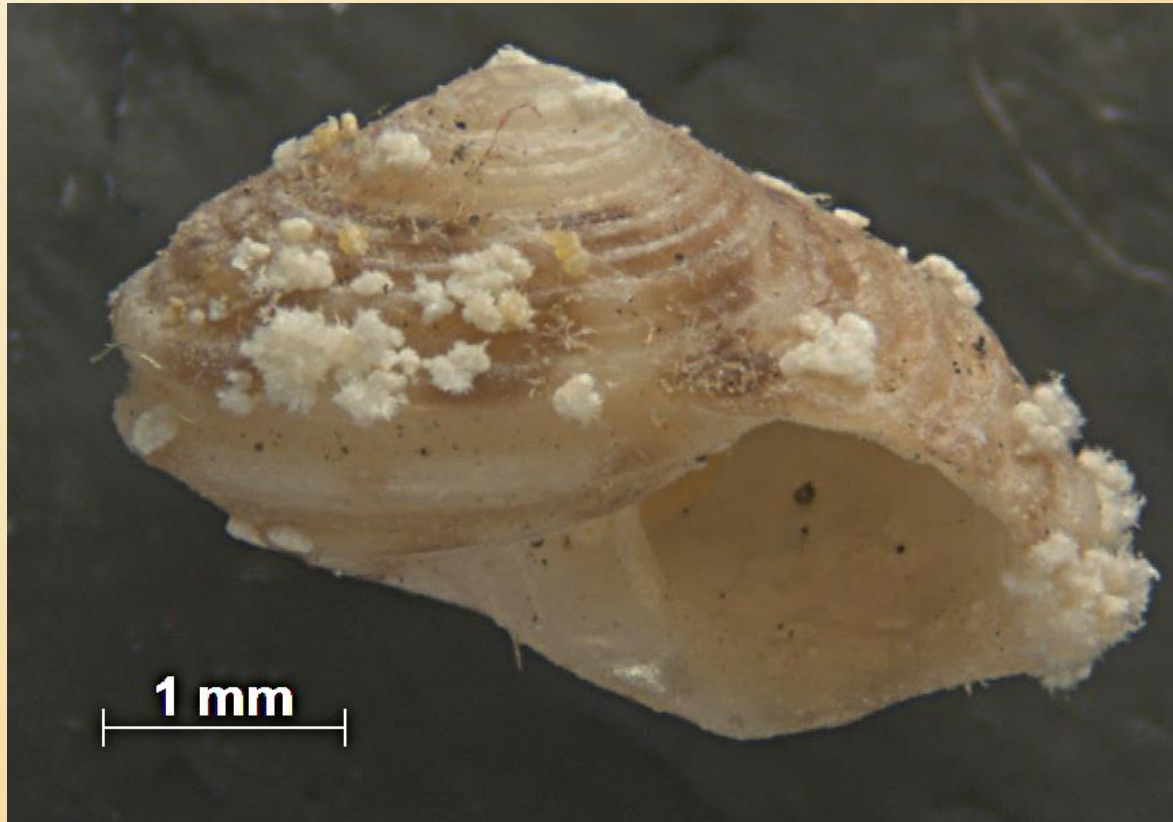
Benefits:

- Easy to view shells
- Aesthetically pleasing
- Easy to add new shells
- Protected from light
- Somewhat protected from shock (earthquake, etc.)

Drawbacks:

- Expense
- Time invested
- Bynes disease risk

Bynes Disease: What is it?

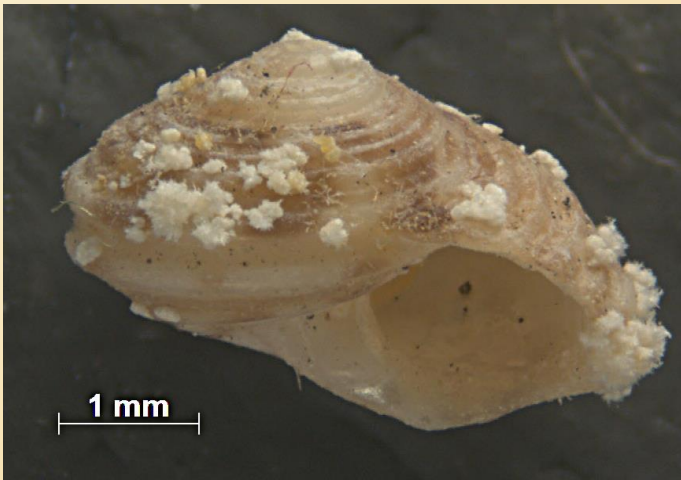


In mollusks:

Degradation
of the
calcium
carbonate
over time

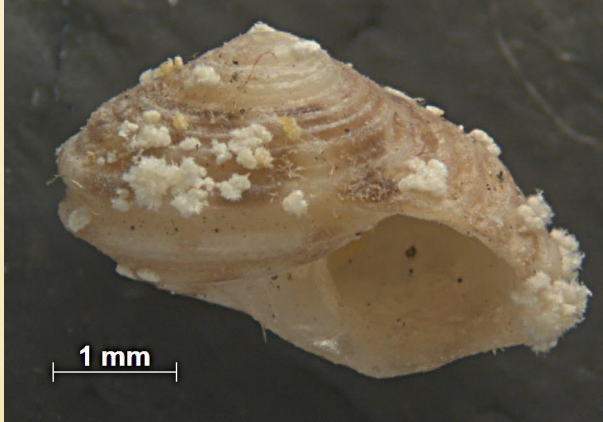
(it is NOT an
infectious
pathogen!!)

Bynes Disease: Primary causes



- Exposure to material that release acidic fumes (wood, cotton, wool, etc.)
- High humidity

Bynes Disease: *Prevention*



- Desiccant (to lower humidity)



- Moderate temperatures
- Periodic ventilation (opening of drawers)
- Synthetic tray cushions, synthetic fiberfill for opercula, synthetic felt (as opposed to cotton or wool)
- Sealing interior wood surfaces

An Alternate Drawer System (with open-topped drawers)

These were custom-built by David Berschauer for his private collection*



Constructed of responsibly sourced mahogany (a lower acid-containing wood), treated with linseed oil

One source for white boxes:
<https://www.papermart.com/p/white-jewelry-boxes/11193>



* See upcoming article on this subject in a future issue of *The Festivus*

Open-topped drawer system that is mass-produced
(IKEA - "ALEX")



Larger Shells



Larger Shells: Labels



Larger Shells: Protection from earthquakes



- Museum putty
- Glass doors*

* I do not have



“Treatment” of Shells

- Mineral oil and alcohol, or silicone (to bring out color)
- Glycerin and alcohol (to protect periostraca)



Almost 10 years later...

Checklists

I only keep checklists of groups I am interested in

Pectinidae (Waayers Coll.)

Self-collected

Purchased or otherwise not self-collected

Subfamily Adamussiinae Habe, 1977

Genus *Adamussium* Thiele, 1934

Genus *Ruthipecten* Beu & Taviani, 2014 †

Subfamily Austrochlamydiae Jonkers, 2003

Genus *Austrochlamys* Jonkers, 2003

Subfamily Camptonectinae Habe, 1977

Genus *Camptonectes* Agassiz, 1864

Genus *Ciclopecten* G. Seguenza, 1877

Genus *Delectopecten* Stewart, 1930

Species *Delectopecten alcocki* (E. A. Smith, 1904)

Species *Delectopecten fosterianus* (Powell, 1933)

Species *Delectopecten gelatinosus* (Mabille & Rochebrune, 1889)

Species *Delectopecten macrocheiricola* (Habe, 1951)

Species *Delectopecten musorstomi* Poutiers, 1981

Species *Delectopecten polyleptus* (Dall, 1908)

Species *Delectopecten vancouverensis* (Whiteaves, 1893) X1, off San Diego

Species *Delectopecten vitreus* (Gmelin, 1791)

Species *Delectopecten zacae* (Hertlein, 1935)

Genus *Hyalopecten* Verrill, 1897

Genus *Lyropecten* Conrad, 1862

Limpets: Lottiidae, Acmaeidae, Nacellidae, Fissurellidae, and Patellidae (Waayers Coll.)

Self-collected

Purchased or otherwise not self-collected

Family Lottiidae

Genus *Actinoleuca* W. R. B. Oliver, 1926

Genus *Asteracmea* W. R. B. Oliver, 1926

Genus *Atalacmea* Iredale, 1915

Genus *Discurria* Lindberg, 1988

Species *Discurria insessa* (Hinds, 1842) X1, California, USA

Species *Discurria insessa* (Hinds, 1842) X7, California, USA

Genus *Erginus* Jeffreys, 1877

Genus *Lottia* Gray, 1833

Species *Lottia abrolhosensis* (Petuch, 1979)

Species *Lottia acutapex* (S. S. Berry, 1960)

Species *Lottia albicosta* (C. B. Adams, 1845)

Species *Lottia alveus* (Conrad, 1831)

Species *Lottia angusta* (Moskalev in Golikov & Scarlato, 1967)

Species *Lottia antillarum* G. B. Sowerby I, 1834

Species *Lottia argrantesta* Simison & Lindberg, 2003

Species *Lottia asmi* (Middendorff, 1847) X6, California, USA

Species *Lottia atrata* (Carpenter, 1857)

Species *Lottia austrodigitalis* (Murphy, 1978)

Species *Lottia borealis* (Lindberg, 1982)

Species *Lottia cassis* (Eschscholtz, 1833)

Species *Lottia cellanica* (Christiaens, 1980)

Species *Lottia conus* (Test, 1945) X6, California, USA

Species *Lottia cubensis* (Reeve, 1855)

Additional Information

45

Volume: 56

THE FESTIVUS

ISSUE 1



THE Festivus

Vol. 56(1)

February 2024



Fossil *Bistolida* from Indonesia

***Piperamarginella* from South Africa**

New Gastropods from the Gulf of Mexico

***Turricula* from Western Australia**

Quarterly Publication of the San Diego Shell Club

Cleaning, Maintaining and Storing Your Shell Collection

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All collections require maintenance. Some more than others. For artwork, this might include restoration, for entomologists, it may involve re-cataloging specimens because of newly named families and/or species, for numismatists, it may be slabbing particularly valuable coins (*i.e.*, encasing in permanent plastic sleeves), and for conchologists, it can include regular cleaning, oiling, and reevaluating storage options. These processes are discussed in more detail below.

Cleaning: Remove all remaining animal tissue by soaking shells in warm soapy water (80-85 degrees, mild temperature and I recommend using Dawn™ dish soap). A syringe may be used to power wash the interior of the shell and remove remaining tissue after soaking. Encrustations on the exterior of the shell may be removed by gentle sand blasting (*i.e.*, where the sand is replaced with walnut shells). Large encrustations (*e.g.*, barnacles 5-20mm) may be removed with a small box cutter blade or one-sided razor blade. Smaller encrustations, (*e.g.*, small worm castings 2-5 mm in diameter), may be removed with a metal medical or dental pick.



After tissue and encrustation removal, place the shell in chlorine bleach for one to several hours (*i.e.*, on average, three hours should be sufficient). Periodically remove the shell from the bleach, wash gently with water and use a toothbrush or other small brushing device with somewhat stiff bristles to remove remaining encrustations partially dissolved by the bleach. Do this two, or three, times. If some encrustations still remain, then use the medical and/or dental pick to remove them.



To remove discoloration from rust or other environmental conditions prepare a solution of Iron OUT™ rust and stain remover. I recommend purchasing the powder form so that you can regulate the concentration of your cleaning solution. Allow the shell to sit submerged in the Iron OUT™ solution for about an hour. More time may be required if the stain is not removed.

...and the
Worldwide Web...!

Sources of Storage Equipment Online

Cornell Drawers:

<https://pinitentomology.com/products/cornell-university-system-drawer>

https://www.forestry-suppliers.com/p/53598/52861/cornell-university-insect-cabinet-drawer?srsId=AfmBOoo4vmGwlMgeh8pnp640TQ8_MOwo7BPgGAMj8SJdoyYI3bX2qfyW

<https://www.atelierjeanpaquet.com/en/shop/cornell-drawers/>

https://ecologysupplies.com/products/cornell-drawer/?srsId=AfmBOor6q_1tAzS-3sFFvh5-esjfbilGClhhekfEYdFEOSxZQ7S1tW3S

Cabinets, Drawers and Unit Trays:

<https://ecologysupplies.com/product-category/insect-storage/>

Cabinets:

<https://www.atelierjeanpaquet.com/en/shop/open-faced-cornell-cabinets/>

<https://www.ikea.com/us/en/p/alex-drawer-unit-on-casters-black-brown-70483429/>

Questions / Thoughts?