

Historical review of the molluscan collection at the Bailey-Matthews National Shell Museum & Aquarium, Sanibel, Florida

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ABSTRACT

This article presents a brief history of the collection at the Bailey-Matthews National Shell Museum & Aquarium from its inception to the present, with goals for the future. The molluscan collection is the youngest of its kind in the United States. It is worldwide in scope, with emphases on Southwest Florida, Florida, the Gulf of Mexico, and the Caribbean, representing the amalgamation of a considerable number of private and institutional collections. In the late 1980s and early 1990s, Founding Director R. Tucker Abbott orchestrated the initial efforts to amass specimens to create a reference collection. Digitization of the collection started in late 1996, about a year after the opening of the Shell Museum. The authors discuss the collection composition, the role that accreditation with the American Alliance of Museums played in the growth of the collection, support of federal grants, sharing of collection metadata in global data aggregators, recent participation in the federally funded “Mollusks of the Eastern Seaboard”, and other outcomes of the collection coming of age.

Additional Keywords: Mollusca, Sanibel, Shell Museum, malacology, cataloging, database, data aggregators, museum accreditation, georeferencing, biodiversity

INTRODUCTION – THE BEGINNINGS

The Bailey-Matthews National Shell Museum & Aquarium’s (herein “the Shell Museum” or “BMNSMA”) on Sanibel, Florida (Figure 1), originally known as Bailey-Matthews Shell Museum, is a young organization. The Shell Museum was incorporated as a non-profit organization in October 1986, following the aspirations of a group of local citizens. Sanibel shell enthusiasts, motivated by the perfect sense of place of having “a shell museum on one of the western hemisphere’s best-known shelling sites” (Halstead, 1996), worked hard in the following ten years to fulfill their dreams. The Shell Museum’s name is a combination of the names of two important Sanibel families. The late Sanibel brothers Francis, John, and Sam Bailey donated the land now occupied by the Shell Museum.

Their grandmother, Harriet (“Hallie”) Matthews hosted the first Shell Festival in 1937, in the Matthews Hotel, which later became the Island Inn.

The Shell Museum’s Founding Director, R. Tucker Abbott (“Tucker”; Figure 2), was an influential malacologist with strong professional connections and who was well-respected among hobbyists and enthusiasts (Harasewych, 1997). Thanks to his popular science articles and books, Tucker was accepted by many as the best-known malacologist in the world at the time (Hallstead, 1996). Well before the Shell Museum opening in July 1995 and in an early effort to start a reference collection where there was none, Tucker launched an informal drive to recruit donations of collections for the organization. For instance, in 1991, Tucker completed an exchange of 1,174 duplicate lots from the National Museum of Natural History (Smithsonian) that effectively acted as “seed” for the donation of dozens of private collections that followed suit (Leal, 2021).

In this first phase of collecting efforts, prior to its opening in 1995, the Shell Museum received circa 200 private collections of all sizes, large and small. Still prior to receiving the building certificate of occupancy in early 1995 and before the “advance opening” to the public in July 1995, the collections by then amassed by Tucker had been stored in the warehouse at WBBH-TV, the NBC subsidiary in Fort Myers, Florida. This was facilitated by the late Bernard Waterman, founder of the former broadcasting conglomerate Waterman Broadcasting and one of the most influential and active board members of the Shell Museum at the time (JHL, *pers. observ.*). The nascent collection was finally relocated to its permanent home in the Shell Museum’s Sanibel building during the second half of 1995, where it started to be organized by volunteers, by donor name, in provisional cases. Tucker’s enduring health problems increased during the second half of 1995. During this short period, the collection was managed almost exclusively by volunteers. Tucker passed away on November 3, 1995, leaving behind a vast legacy and setting the tone for the future of the Shell Museum as a professional organization (Harasewych, 1997).



Figure 1. The Bailey-Matthews National Shell Museum & Aquarium in June 2025. Photo: José H. Leal.



Figure 2. Bailey-Matthews National Shell Museum & Aquarium's Founding Director Robert Tucker Abbott, September 28, 1919–November 3, 1995. Photo: R. Tucker Abbott's archives at BMNSMA.

Following Tucker's passing, José H. Leal, Ph.D., (Figures 3, 9) was hired in early 1996 as Director, a role he served in for the following 17 years. His tenure was marked by the initiation and development of a robust range of educational programs and major growth in the collection. Under his leadership, in 2010 the Museum earned accreditation by the American Alliance of Museums (BMNSMA, 2025a).

In early 1996, the provisional cases used for the dry collection were standard, upright office cabinets without shelves that collection volunteers fitted with hand-built wooden rails and shallow drawers. In his first year as the museum Director, Leal started to replace the original retrofitted office cabinets for all-metal collection cabinets made by Pride Rehabilitative Industries and Diversified Enterprises, Inc. of Brandon, Florida. These cases were custom-made and patterned after the units then in use at the Invertebrate Department of the Florida Museum of Natural History. Initial funding for the acquisition of these cases was provided by the Claiborne and Ned Foundation and the Brunning Foundation (both of Fort Myers, Florida) (BMSM, 1997, 1998). After that, the acquisition of the bulk of new metal cabinets was made possible through substantial financial gifts from the Sanibel Captiva Shell Club (Figure 4).

The Sanibel Captiva Shell Club also sponsored photographic equipment, including cameras, lenses, a copy-stand, and other items. The club also contributed toward the purchase of a Leica MZ-8 research microscope, in collaboration with contributions from Dr Harry G. Lee, of Jacksonville, Florida, Mrs. Marjorie ("Betty") Lloyd, of Sanibel, Florida, and the New York Community Trust.



Figure 3. José H. Leal (left) in 1999, aboard R/V EDWIN LINK during a research cruise off the Bahamas, with colleague and Smithsonian's Digital Media Coordinator Robert Costello. Photo: Chip Clark, Smithsonian Institution.

Additionally, immediately after his appointment as Director in early 1996, Leal started to reorganize the dry collection by converting the early arrangement (collections segregated by donor) into the standard, universally accepted taxonomic sequence found in museums worldwide.

The Shell Museum name has changed twice in the past ten years, first to include “National” (in 2014), then, having “& Aquarium” added at the end of the name after accreditation by the Association of Zoos and Aquariums (AZA) (in 2022). The collection acronym officially adopted, BMSM (BMNSMA, 2024; iDigBio, 2024; InvertEBase, 2025; OBIS, 2024; Sierwald et al., 2018), predates the name changes mentioned above; it has not changed despite past alterations to the original museum name, and is used herein only to denote the collection and as the acronym for early publications by the Shell Museum. This account relates only to the history of Shell Museum's scientific collection of specimens, not the Living Collection on display to the public.

INITIAL CATALOGUING

Exceptionally, cataloguing of the BMSM collection started already in a digital format. By late 1996, with assistance from collection volunteer and zoologist Jon Greenlaw, the



Figure 4. Bailey-Matthews National Shell Museum & Aquarium. Portion of collection cases and dedicated work area. Photo: José H. Leal.

Shell Museum consolidated its first digital catalog. The platform for that resource was the relational database software dBASE III Plus™, then produced by Borland. A year later, shell enthusiast Richard “Dick” Willis (Figure 5), a systems analyst by training, joined the staff of collection volunteers. Dick proposed the adoption of Microsoft Access™ and proceeded to transfer all the existing metadata to that platform. Access™ remained the computational engine behind the Shell Museum catalog between 1997 and late 2018, when Specify 7 (cloud version) (<https://www.specifysoftware.org/products/specify-7/>) was adopted as the collection cataloging software. Use of a cloud-stored catalog allows for the remote management of the catalog and collection.

The R. T. Abbott Visiting Curatorship

Between 1997 and 2016 the Shell Museum invited applicants to the Curatorship, which was established originally in accordance with Tucker’s wishes, in a document formally sanctioned by the Board of Trustees in 1996. The Curatorship was awarded annually to enable an accomplished malacologist to visit the Shell Museum for a period of one week. Abbott Fellows were expected, by performing collection-based research, to assist with the curation of portions of the Shell Museum collection and to provide at least one talk for the general public. A list of past recipients is provided as Appendix 1. The last Curatorship was awarded in 2016, and the program was discontinued in 2017.

GROWTH OF THE MOLLUSCAN COLLECTION

Accreditation and the Need to Improve Collection Documentation

In 2004, the Shell Museum received a grant from the Institute of Museum and Library Services (IMLS, 2004)



Figure 5. Volunteer (and retired systems analyst) Richard “Dick” Willis working on the MS Access™ collection catalog that he created and perfected, in a 2008 photo. Photo: José H. Leal.

to undergo the American Association of Museum’s (AAM, now American Alliance of Museums) Conservation Assessment Program (CAP); the site visit for the program was completed in that same year. The CAP report provided customized guidelines for collection conservation and laid the groundwork, from the standpoint of the collection, for future work toward accreditation with AAM.

In late 2008, the Shell Museum applied for accreditation with AAM, receiving its first accreditation with the organization in March 2010. Despite the hard work from a group of devoted collection volunteers, at the time the Shell Museum submitted its accreditation application in 2008, staff had cataloged only circa 27,000 of the estimated (at the time) 150,000 lots in its collection (BMSM, 2008). In AAM’s Accreditation Commission Decision Details (AAM, 2010), in addition to commending the Shell Museum for its “...research, dissemination of knowledge, mission-driven exhibitions and educational programs...”, the Accreditation Commission nevertheless recommended “...the filling of the critical collections manager position which will allow the Museum to further improve the documentation of collections...”.

The Cataloguing Grants That Followed

Encouraged by AAM’s feedback, Shell Museum staff applied for a “Museums for America” grant from the Institute of Museum and Library Services (IMLS), requesting funds to fill the Collection Manager position. In 2012, the Shell Museum was granted an IMLS award to fund the *Bailey-Matthews Shell Museum Cataloguing Project* (IMLS, 2012; Leal, 2012–2016). The 2012 award allowed the Shell Museum to initially hire a full-time Collection Manager. This original attempt didn’t work as expected and, about a year later, with consent from IMLS, staff moved to replace the full-time incumbent for two part-time staffers. The 2012 award was continued three years later by a follow-up award toward the *Bailey-Matthews National Shell Museum Cataloguing Project – Phase 2* (IMLS, 2015; Leal, 2015–2019). The 2015 grant allowed the Shell Museum to add two additional part-time staff to boost the cataloguing efforts (while the 2012 grant was still active), and the cataloguing rate yet again improved. Grant-funded Collection Assistant Jessica Godwin made a substantial contribution to cataloguing efforts at the time. Figure 6 shows the dramatic increase in cataloguing rates during the periods of these two grants.

IMLS was also instrumental in supporting an important phase in the development of the collection digitization, via another “Museums for America” grant (IMLS, 2018; Leal, 2018–2022), in this instance to fund the four-year *Digital Imaging Project* (Leal, 2019b). The project resulted in the production of 19,907 digital individual images of shells, opercula, body parts, original labels, and notes of 3,786 collection lots from the type collection, Southwest Florida, Florida in general and the collection from Abaco, Bahamas, the latter cataloged and

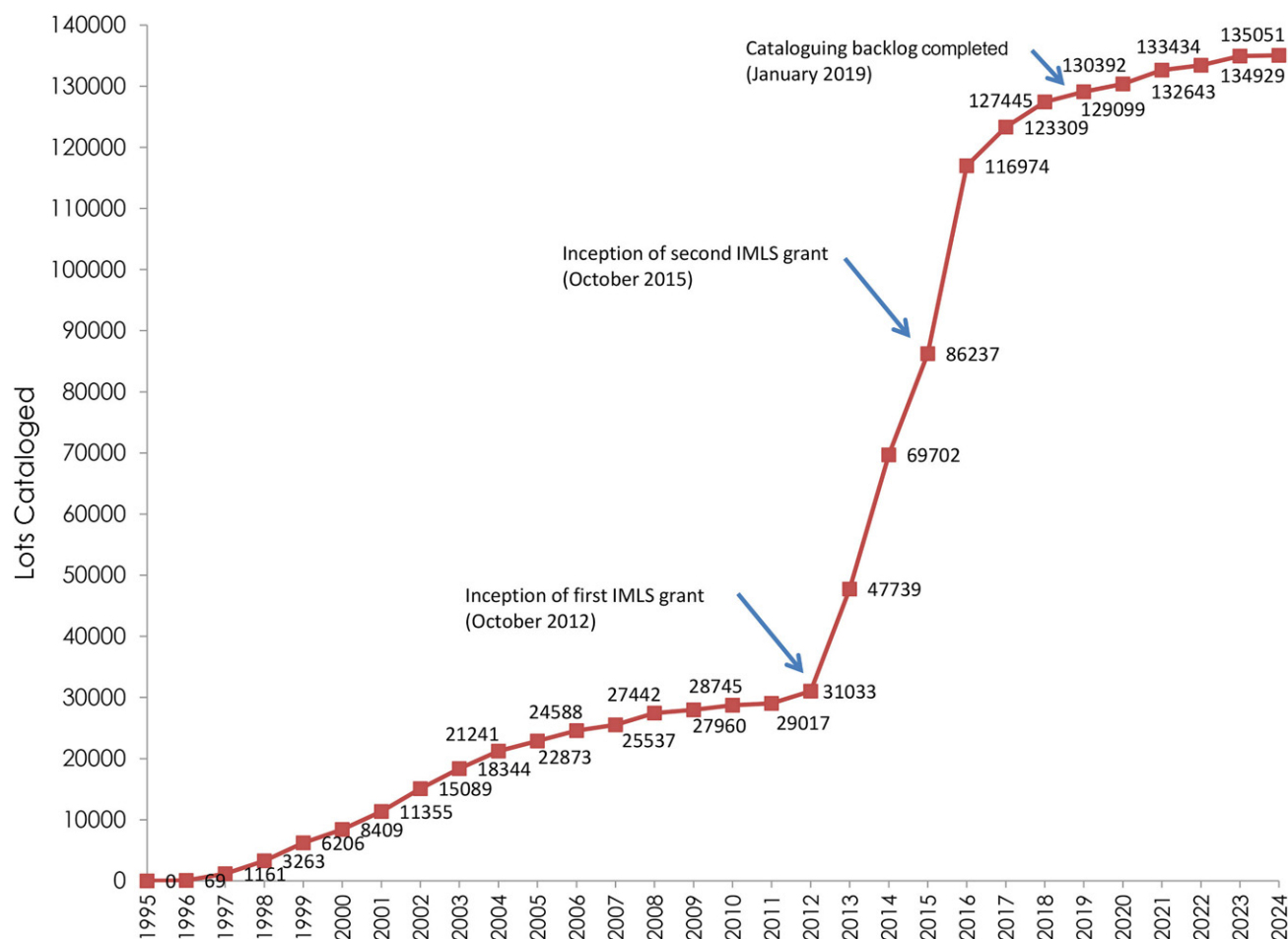


Figure 6. Cataloging rates between 1995 (Museum opening) and 2024. The changes in slope demonstrate the impact of the two IMLS grants on cataloging rates between 2012 and early 2019. Completion of the cataloging backlog in early 2019 is also indicated. Tick marks on horizontal axis correspond to year ends.

donated by Colin Redfern, in 2014 (see examples of *Digital Imaging Project* images in Figure 7). The following photographers were employed as Digital Imaging Specialists at different stages of the project: James F. Kelly (2019–2021) (Figure 8), Patricia A. Starkey (2019–2021) (Figure 8), Chris Kovaz (2021–2022) (<https://www.shellmuseum.org/blog/meet-the-digital-imaging-specialists>). The imaging efforts continue, now supported by the *Mollusks of the Eastern Seaboard* project (below).

The Shell Museum's type collection includes 466 type specimens, of which 15 are holotypes, representing 150 taxa, of which 146 are types of species and four of subspecies (Leal, 2021).

The Collection Comes of Age

In 2017, the Shell Museum participated in a collection survey spearheaded by Rüdiger Bieler, Petra Sierwald (both Field Museum), Elizabeth Shea (Delaware Museum of Nature and Science, Wilmington), and Gary Rosenberg (Academy of Natural Sciences of Drexel University, Philadelphia). The survey aimed to compile collection data

for the institutional malacological collections in the U.S.A. (Sierwald et al., 2018). The timing of the survey worked well for the Shell Museum as, thanks to IMLS support, the institution was about to complete cataloging the backlog of its collection. Accordingly, Sierwald et al. (2018) listed the Shell Museum collection as a “medium-large” one, ranking as 13th in size in the U.S.A. An account of the status of the BSM collection at that point was summarized by Leal and Godwin (2017).

The collection is often consulted via its own web portal and data aggregators (see “BMSM's Global Presence” below). Collection specimens are sent out on loan to qualified researchers on a regular basis. Check Herbert et al. (2022) to see one example of the use of our collection specimens in a seminal article about sclerochronology, lifespan, other biological attributes, and conservation of a local species, the Horse Conch (*Triplofusus giganteus*). Other taxonomic research generated at the Shell Museum and including BMSM collection material includes Leal and Harasewych (1999); Leal (2008) (Figure 9), Sasaki and Leal (2008), Leal et al. (2017), Leal (2021), Leal et al. (2024).



Figure 7. Composite images from the IMLS-funded *Digital Imaging Project* seen as attachments to the Museum catalog.



Figure 8. From left, Digital Imaging Specialists James F. Kelly and Patricia A. Starkey with Science Director & Curator José H. Leal, in a photo from 2019. Photo: Lorin Buckner.

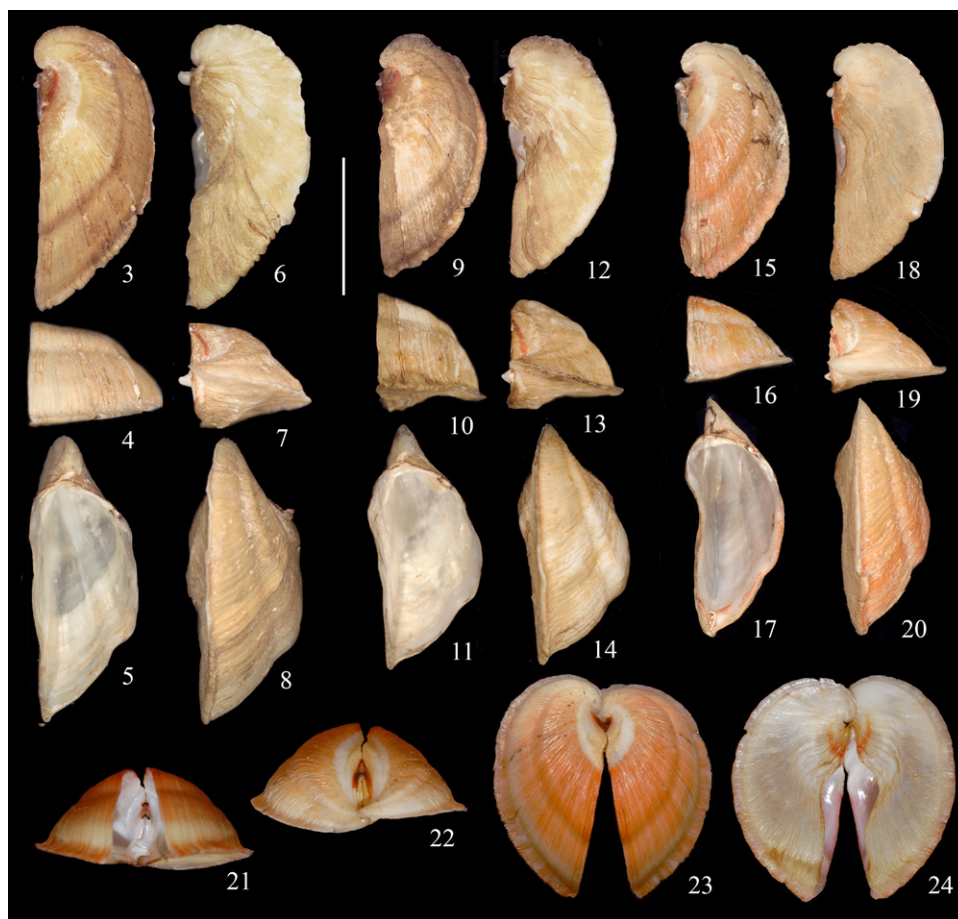


Figure 9. Plate illustrating the type series of *Dilemma frumarkernorum* Leal, 2008. From the original publication.

The Eastern Seaboard Project

In 2019, as an informal result of the participation in the survey and the resulting classification mentioned above, the Shell Museum was invited to join in a Thematic Collections Network (TCN) proposal presented to the National Science Foundation under their Advancing Digitization of Biodiversity Collections (ADBC) program. The project, titled “Mobilizing Millions of Mollusks from the Eastern Seaboard” (ESB) and awarded in 2020 (Leal, 2020–2025; NSF, 2020), has as lead principal investigators Rüdiger Bieler and Petra Sierwald (Field Museum). The project involves cooperative efforts on the part of 15 significant collections in the U.S.A., most from east of the Mississippi, to digitize, clean, standardize, georeference, and mobilize the data for collection lots from the Eastern Seaboard of the United States, from Maine to Texas. At the onset of the project, the Shell Museum had already cataloged 20,836 Eastern Seaboard lots. This basically represented the entire subset of Eastern Seaboard lots in the Shell Museum. Most of our proposed efforts in the project involved cleaning and georeferencing data, plus the proposed cataloguing of up to 5,000 Eastern Seaboard lots originating from bequeathed and prospective new collections. Accordingly, since the inception of the ESB

grant, an additional 4,461 Eastern Seaboard records have been cataloged for a total of 24,707 in the collection. Three NSF-supported part-time collection assistants have worked or are working in the ESB project, Haley Kraczek (August 2021–November 2022), Sarah Allen (December 2024–May 2025), and Chris Whitt (junior author on this article) (November 2022–August 2025) (Figure 10). In 2025, the project is in its no-cost extension year, and we are focusing efforts aiming at the completion of our shares of in-house georeferencing and Collaborative Georeferencing (see below).

Georeferencing

A key component of our participation in the ESB project is the complete georeferencing of all Eastern Seaboard collection localities in the collection. Most of this georeferencing was done retroactively, as most of the records had already been cataloged without coordinates. Using the geographic information provided by the collector, staff can estimate or precisely infer the coordinates of the points or areas where the specimens were collected.

Through our cataloguing software, Specify 7, staff are able to add locality data using the plugin GEOLocate (Rios and Bart, 2010). GEOLocate allows users to convert



Figure 10. Part-time Collection Assistant and junior author of this paper, Chris Whitt. Photo: Carly Hulse.

textual locality data into geographic coordinates. In our collection, 24,157 records from the Eastern Seaboard have been georeferenced by Chris Whitt, Sarah Allen, and Haley Kraczek as part of the ESB project (Figure 11; InvertEBase, 2025). This has brought the total number of records with coordinates to 34,898, which is around 26% of the entire collection.

Additionally, as a part of the ESB project, the Museum participates in GEOLocate's Collaborative Georeferencing web-based collaborative client (CoGe) (Rios and Bart, 2010). The goal of the CoGe project is to provide a mechanism whereby groups of users can form communities to collaboratively georeference and verify a shared dataset. ESB's principal investigators decided to combine and share all geographic locality data from their Eastern Seaboard records and upload it to CoGe. As of June 13, 2025, the Shell Museum has georeferenced 40,320 localities along the west coast of Florida, the Florida Panhandle, and the Florida Keys. Once each of the localities has been checked and corrected, the institution to which the localities belong can reintegrate the improved data into their own databases. The final goal of this sizeable collaborative effort is to properly georeference all the Eastern Seaboard mollusk records from the 15 U.S.A. collections participating in CoGe.

BMSM's GLOBAL PRESENCE

The BMSM data set is regularly pushed to the main biodiversity online aggregators and compilers such as GBIF <https://www.gbif.org/dataset/417f4d21-959b-4773-90a2-c38d1822d873> (registered September 2016), iDigBio <https://portal.idigbio.org/portal/recordsets/b40e13f7-a79a-4265-93d9-3b4878dfc988> (registered July 2016), OBIS

<https://obis.org/dataset/a0d5f629-c546-4126-95b8-14d8bc831d20> (registered July 2022), InvertEBase <https://invertebase.org/portal/collections/misc/collprofiles.php?collid=55> (registered May 2022), and our own BMSM collection web portal <https://webportal.specifycloud.org/shellmuseum/> (from February 2019). BMSM is also registered with the Global Registry of Scientific Collections (GRSciColl) at <http://grbio.org/institutional-collection/bailey-matthews-national-shell-museum-mollusks-collection> and <https://scientific-collections.gbif.org/collection/8aee5cc8-0c25-4b61-a648-a7886cd3ed85>.

COLLECTION COMPOSITION

The Shell Museum houses a worldwide collection with emphases on Florida, the Gulf of Mexico, and the Caribbean (BMNSMA, 2025b). Table 1 lists the ten largest collections incorporated by number of lots. Among regionally significant (for Southwest Florida) collections received were those of Dale V. Stingley, of Evanston, Illinois then LaBelle, Florida (Hallstead, 1996) and, later, that of William C. Brumbach, of Reading, Pennsylvania, then Sanibel, Florida (Leal, 2019c; North Carolina Botanical Garden, 2023). Stingley's collection was massive (more than 11,000 lots) and global in scope, whereas Brumbach's included only shells collected in the 1960s and early 1970s on Sanibel and Captiva. Both Stingley's and Brumbach's record-keeping are close to perfection, even by today's standards. In 2011, the Shell Museum received a large collection (about 11,000 lots) from the College of Arts and Sciences at the Florida Gulf Coast University (FGCU) in nearby Fort Myers, Florida. Another important collection received, this one in 2014, was Colin Redfern's (Leal, 2019a; Figure 12), an exhaustive assemblage of shells and preserved specimens from Abaco, Bahamas, collected over a period of 40 years, all fully described and illustrated in Colin's two excellent books (Redfern, 2003; 2013). Shell Museum staff has also engaged in several collecting endeavors that include, for example, the October 1999 *Bahamas Deep-sea Expedition* organized by M. G. "Jerry" Harasewych (National Museum of Natural History, Smithsonian Institution) and José H. Leal (Shell Museum), and funded by the late Mrs. Barbara Wood, widow of former Chicago Tribune publisher Mr. J. Howard Wood.

The taxonomic (by molluscan class) and "major categories" compositions including the numbers of lots and specimens (as of February 4, 2025) are presented on Figures 13, 14. Five classes of mollusks are represented in the collection, Gastropoda, Bivalvia, Polyplacophora, Scaphopoda, and Cephalopoda (Figure 13). For a few collection lots lacking number of specimens, those were determined by multiplying the number of those lots by the average number of specimens/lot for that particular class. Figure 14 shows the distribution of collection lots per major category, including fossils. The values for lots in the marine, freshwater, and terrestrial categories exclude fossils from these different ecosystems. As of June 13, 2025, the Shell Museum collection comprises

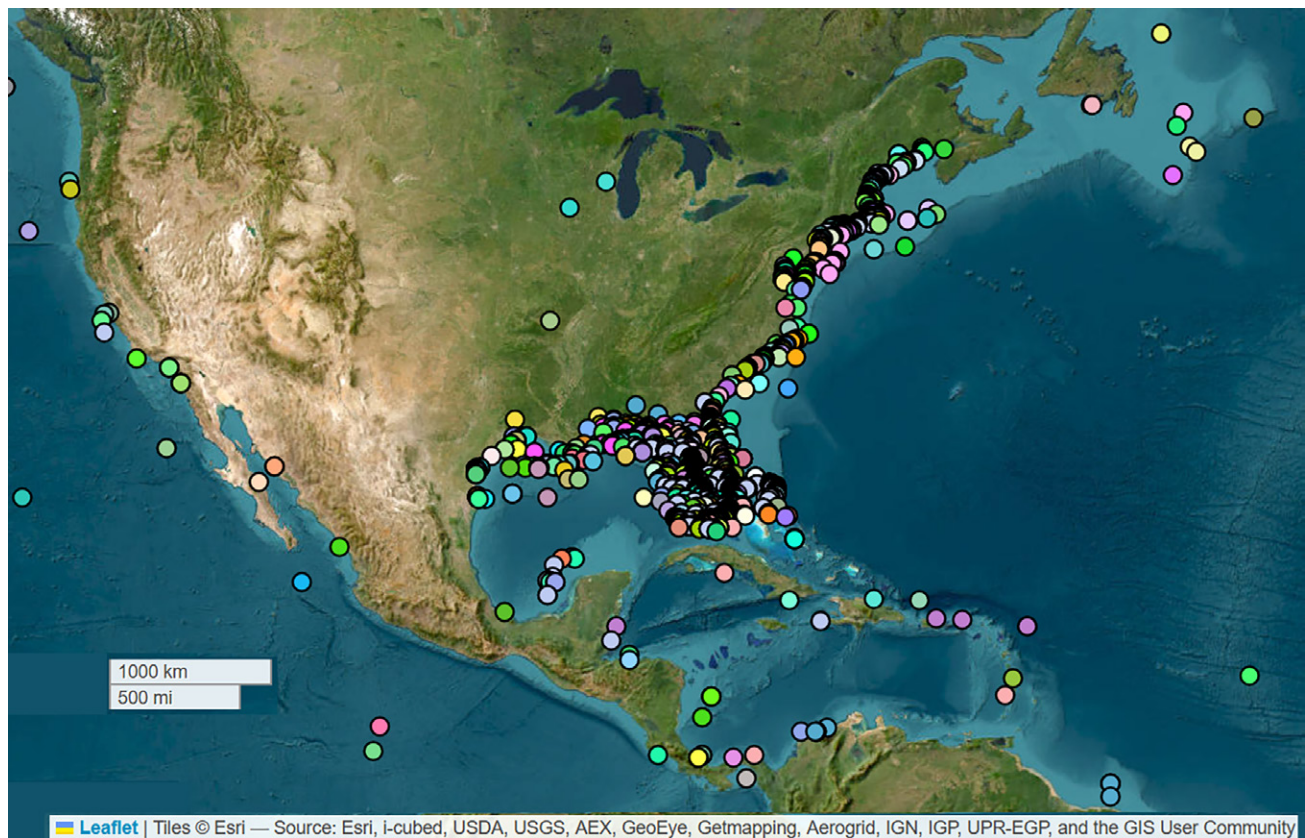


Figure 11. Graphic representation of georeferenced BSM collection lots in North America showing 24,157 lots from the Eastern Seaboard. From the dataset uploaded on June 3, 2025 to InvertEBase (InvertEBase, 2025).

Table 1. Ten largest collections donated to the Shell Museum as of June 2025. James Moore's collection was given multiple accession numbers, as it was donated in parts over a period of 11 years.

Donor	Accession number	Number of cataloged lots	Scope
Alfred Beadleston	445	13444	Worldwide
Colin Redfern	720	9164	Abaco and neighboring islands, Bahamas
FGCU College of Arts and Sciences	662	8410	Worldwide
Dale Stingley	22	7570	Worldwide with large Florida representation
James Moore	656, 666, 742, 757, 758, 759, 794, 811, 826, 836, 849	5835	Worldwide with large Florida representation
Jon Greenlaw	541	5218	Worldwide
Louis E. & Gertrude B. Dietrich	329	4285	Worldwide
Hal Pilcher	714	3205	Florida with some worldwide representation
Laverne Weddle	23	2211	Worldwide
Marilee McNeilus	765	2132	Worldwide
	Total	61474	

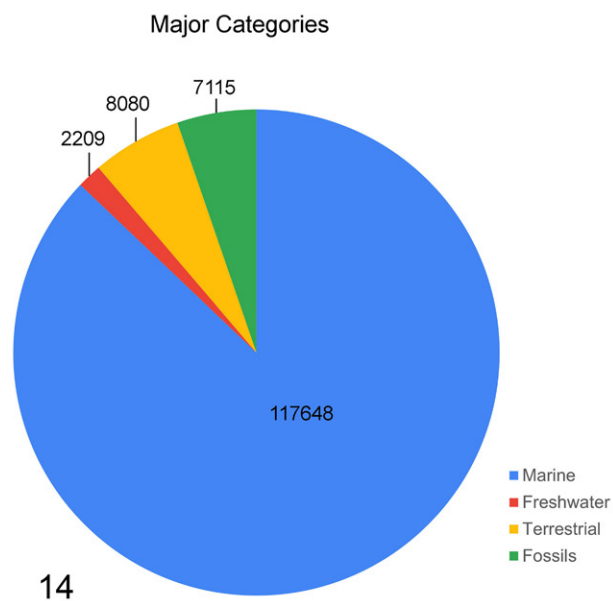
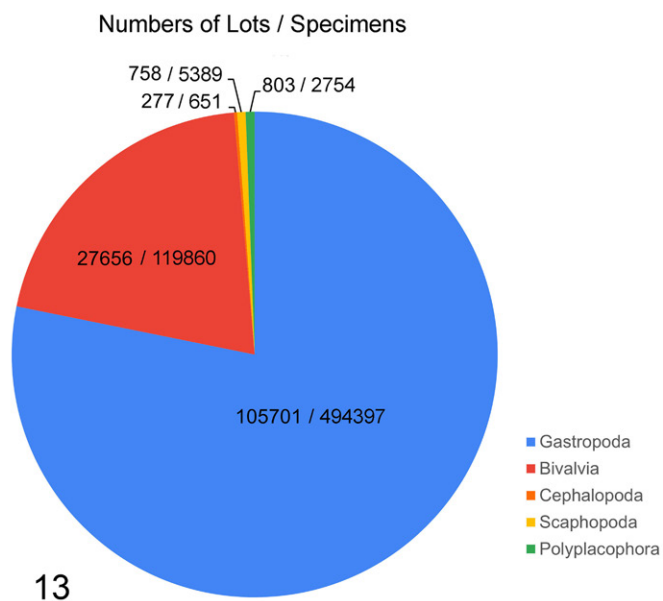


Figure 12. Colin Redfern (November 22, 1938–January 25, 2019) in 2015, delivering the last batch of his Abaco, Bahamas collection to the Museum. Photo: José H. Leal.

133,072 “dry” lots (shells and/or associated dry structures such as egg capsules, radulae, opercula, etc.) and 2,382 “wet” (ethanol-preserved) lots.

RELATED ACTIVITIES AT THE NATIONAL SHELL MUSEUM & AQUARIUM

In parallel and to some extent supporting collection efforts and the Shell Museum mission, the organization is engaged in several collection-related endeavors. Since 1998, the Shell Museum has been publishing *The Nautilus*, with Leal as its Editor-in-Chief. From 30 July to 4 August 2004, the Shell Museum hosted the 70th Annual Meeting of the American Malacological Society on Sanibel Island (Figure 15), with Leal as AMS President and senior editor of the Abstracts (Leal et al., 2004; Figure 16). Since 2010, the Shell Museum has biennially hosted (every even-numbered year) Florida United Malacologists (BMNSMA, 2025c) (Figure 17). The collection also provides the bulk of the images used in the Shell Museum’s *Southwest Florida Shells* regional online guide (Leal, 2025a; Figure 18). The collection provided the bulk of the shell specimens used in the design and fabrication of the renewed “Great Hall of Shells” currently under installation at the Shell Museum as part of the renovation that followed the damage inflicted by Hurricane Ian on September 28, 2022 (Leal, 2025b). In addition, the Shell Museum and its collection have been featured in a special episode of the series *Changing Seas* produced by the South Florida affiliate of the Public Broadcast System (South Florida PBS, 2023).



Figures 13, 14. Composition of BMSM collection. **13.** Numbers of lots/specimens for the five classes represented (as of January 4, 2025). The graphic representation refers to numbers of lots with numbers of specimens added for reference. **14.** Numbers of lots for four major ecosystem categories (as of January 4, 2025). The values for the marine, freshwater, and terrestrial categories exclude fossils from these major categories.



Figure 15. Group photo at the 70th Annual Meeting of the American Malacological Society, August 2004. Photo: Chris Nealon.

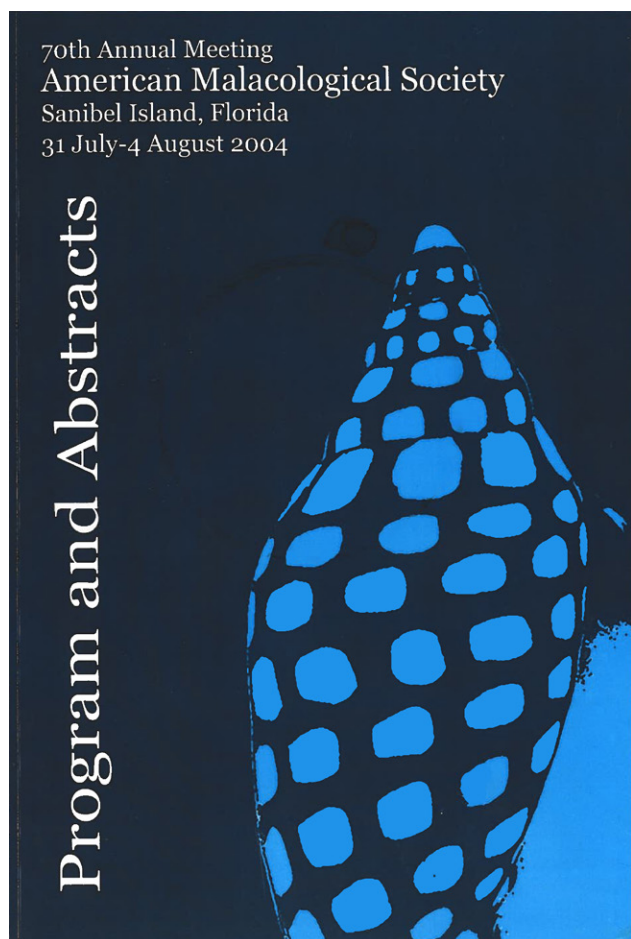


Figure 16. Cover of the book of Program and Abstracts for the 70th Annual Meeting of the American Malacological Society, August 2004. The illustration portrays a detail of a *Scaphella junonia* shell: Design by José H. Leal.

THE MARGARET THORSEN LIBRARY

The Margaret Thorsen Library at the Shell Museum consists of an extensive collection of scientific and popular books, scientific journals and shell club newsletters from around the world. The library was named after Dr Margaret Thorsen, an archivist and Shell Museum volunteer who first organized and manually cataloged the initial book donations. The library holds complete sets of classic malacological journals such as *The Nautilus*, *The Veliger*, *American Malacological Bulletin*, *Venus*, *Journal of Molluscan Studies* and many others.

The Margaret Thorsen Library has had steady support from the Sanibel Public Library (<https://sanlib.org>) for almost 30 years. In the late 1990s, our Library catalog was created via retrospective cataloguing in the WorldCat system (OCLC, 2025) thanks to a grant from the Southwest Florida Library Network (SWFLN, <https://swfln.org>). After that, the Sanibel Public Library took over the task of updating our Library catalog on a regular basis. For many years Candy Heise, former reference librarian at the Sanibel Public Library, was one of our most active Library volunteers, working on one of her free days with Cindy Timm to update, organize, and catalog the Library holdings. After Hurricane Ian (which did not affect directly our Library), the partnership continues, with Matt Gindling, Eden Sherman, and Shelby Stuebner from the Sanibel Public Library working to catalog and reorganize our Library's holdings (Santiva Chronicle, 2024).

THE LIVING COLLECTION

The Shell Museum displays living mollusks and other marine life in eleven aquariums located on the ground floor of the building. In addition, there are several quarantine



Figure 17. The 2022 meeting of Florida United Malacologists took place on April 2, 2022 at the Shell Museum.

tanks that hold recently acquired animals before they can be moved to the public areas. Animals from the Living Collection are displayed for educational purposes and have been the subject of scientific and conservation-oriented studies (e.g., Hulse et al., 2023; Leal and Mensch, 2019; Leal et al., 2017; Leal et al., 2025). Holdings in the Living Collection are digitally cataloged using Zoological Information Management System (ZIMS) by Species 360® (www.species360.org).

The Living Collection (marine life) is managed via the Shell Museum's Living Collection Policy, which abides by the standards and guidelines of the Association of Zoos and Aquariums. The Living Collection Policy, however, follows the Scientific Collection Management Policy as part of a single document.

COLLECTION MANAGEMENT POLICY

Having 501(c)(3) status under the Internal Revenue Code, the Shell Museum is governed by a board of trustees. One of the mandates of the board is to ensure that the organization embraces the public trust they hold and their collective responsibility to preserve, conserve, and protect the collection. Those standards are presented in the Collection Management Policy, a document required

by the American Alliance of Museums for accredited museums. The Shell Museum most recent version of the Collection Management Policy dates from February 26, 2025. The Policy outlines the scope of collection, how the Shell Museum cares for and makes its collection available to the public, and clearly defines the roles of the parties responsible for the collection's management.

The Policy stipulates that the collection accepts type and voucher material and any preserved mollusks or shell collections of great scientific, historical, or educational significance. Other material is acquired only if it belongs in an area of collection strength (Florida, the Caribbean, and the Eastern Seaboard of the U.S.A.), is of research interest to the staff, or serves some other special purpose as approved by the Shell Museum Curator.

STRATEGIC PLANNING AND COLLECTION POLICY

The arrival of hurricanes Ian in 2022 and Milton in 2024 raised concerns about the long-term safety of the collection. The collection resides on the third floor of the Shell Museum building, but damage to the roof during Hurricane Ian threatened the integrity of the collection and prompted the temporary relocation of 40% of the



Figure 18. Page from the “Southwest Florida Shells” online guide (Leal, 2025) showing 12 species represented by shells from the BMSM collection. Most images on this figure were created through the *Digital Imaging Project* funded by IMLS.

collection to a more protected area on the second floor of the building. The Shell Museum Board of Trustees and staff are considering relocation of the collection, library, and research areas of the Shell Museum to the mainland (Fort Myers), away from potential flooding and the severe impacts of eventual wind damage. From the more general planning standpoint, several collection goals and objectives are outlined in the 2021–25 Strategic Plan (soon to be replaced by a new five-year plan), including

maintenance of online access, increasing availability of different media formats, evaluation of storage needs, and exploring the possibility of open-storage public viewing of parts of the collection for the public.

ACKNOWLEDGMENTS

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Appendix 1. Recipients of the R. Tucker Abbott Visiting Curatorship (1997–2015) and their study topics. The recipients' professional affiliations are those at the time of the awards.

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- 1997.** Dr. Gary Coovert, Curator of Biology, Dayton Museum of Natural History, Dayton, Ohio; Family Marginellidae (Gastropoda, Caenogastropoda)
- 1998.** Dr. John B. Wise, Curator of Mollusks, Houston Museum of Natural Science, Houston, Texas; Family Pyramidellidae (Gastropoda, Heterobranchia)
- 1999.** Dr. Peter D. Roopnarine, Assistant Curator, Department of Invertebrate Zoology and Geology, California Academy of Sciences, San Francisco, California; Subfamily Chioninae (Bivalvia, Veneridae)
- 2000.** Dr. Eugene V. Coan, Research Associate, California Academy of Sciences, San Francisco, and Santa Barbara Museum of Natural History, Santa Barbara, California; General organization and taxonomical updates of the bivalve section of the collection.
- 2001.** Not awarded
- 2002.** Dr. Daniel L. Geiger, affiliated with the Natural History Museum of Los Angeles County and the Santa Barbara Museum of Natural History, California; Families Haliotidae, Scissurellidae, and Fissurellidae.
Dr. Alan J. Kohn, professor emeritus of zoology at the University of Washington, Washington; Family Conidae; determined the feasibility of a manual of western Atlantic Conidae.
- 2003.** Dr. Ellen E. Strong, Assistant Professor, James Ford Bell Museum of Natural History, St. Paul, Minnesota; The Caenogastropoda.
- 2004.** Not awarded
- 2005.** Dr. Ángel Valdés, Associate Curator of Mollusks, the Natural History Museum of Los Angeles County, California; Opisthobranchs.
- 2007.** Dr. Diarmaid Ó Foighil, Museum of Zoology, University of Michigan; Family Mytilidae with a focus on *Brachidontes* and *Geukensia*.
- 2008.** Dr. G. Thomas Watters, Museum of Biological Diversity, Ohio State University; Several genera of tropical Buccinidae and Pisanidae.
- 2009.** Dr. Jeffrey Nekola, University of New Mexico; Florida land snails of several families.
- 2010.** Dr. Bruce Neville, Texas AM University; Family Epitoniidae and other Janthinoidea (Gastropoda)
- 2011.** Not awarded
- 2012.** Dr. Eugene V. Coan, California Academy of Sciences and Santa Brabara Museum of Natural History; General organization and taxonomical updates of the bivalve section of the collection – Phase Two.
- 2013.** Not awarded
- 2014.** Dr. Harry G. Lee, Citizen Scientist, Jacksonville, Florida; Micromollusk families Tornidae, Rissoinidae, Eulimidae, Pyramidellidae from Southwest Florida.
- 2015.** Not awarded
- 2016.** Dr. Sergio Mendonça de Almeida. University of São Paulo; Family Veneridae.
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