

A Museum Without Walls

2015–2020



Virginia Museum of
NATURAL HISTORY

Message from the Secretary of Natural Resources



Drawer of ground beetles from many Virginia localities.

Virginia's natural resources are as varied as they are unique. From the Appalachian Plateau to the Coastal Plain, scientists and naturalists have celebrated the Commonwealth beginning with Thomas Jefferson's work *Notes on the State of Virginia* (1785). Our natural resources drive our economy, support quality of life, and provide context for scientific discovery.

At the Virginia Museum of Natural History, new discoveries provide insight on how to best use and conserve our natural treasures. One look into the paleontological laboratory reveals a wealth of ancient creatures found nowhere else on earth but the Commonwealth. Extensive rows of storage boxes of native Virginia insects collected by museum scientists and members of the state's natural heritage group yield a snapshot of tremendous biological diversity. Engaging a staff archaeologist reminds us of just how intriguing our historic and prehistoric past is and how Virginia shaped the United States as we see it today.

As a Museum Without Walls, VMNH staff tackle educational Standards of Learning and provide teachers with resources for curriculum. The exhibits benefit from work with sister state agencies, such as Game and Inland Fisheries, Marine Resources, Environmental Quality, Conservation and Recreation, and Historic Resources. Education and exhibit staff reach across Virginia to impact a quarter million people per year with exhibits, programming and science.

Visit and support the museum at its Starling Avenue facility in Martinsville or at one of its many outreach areas. That visit will provide a unique lens with which to view Virginia's fantastic natural resources.



Molly Ward,
*Virginia Secretary of
Natural Resources*

VMNH Mission:

To interpret Virginia's natural heritage within a global context in ways that are relevant to all citizens of the Commonwealth.

Accomplishing & communicating innovative science

■ *I view no science with more partiality than natural history.*

— Thomas Jefferson

Great science can spark imagination and excitement, but it has to be communicated effectively. As staff grow the museum's already extensive collections, increased efforts will be made to share new discoveries statewide.

VMNH staff produce a variety of scientifically accurate casts like these replicas of fossil teeth from Saltville, Virginia.

OBJECTIVE 1:

1.1 Develop collections based on areas of greatest need.

- Support ongoing research and associated collections acquisitions.
- Acquire orphaned collections opportunistically.
- Acquire collections representing historic or threatened sites.
- Develop a list of future funding needs by 2016; re-evaluate as needed.

1.2 Make research and collections globally accessible.

- Establish a searchable, online database for each collection.
- Make all past and current VMNH publications available online.
- Develop a list of future funding needs by 2016; re-evaluate and document any novel technological opportunities in 2017.
- Publish at least one issue of *Jeffersoniana* annually, and one issue of another VMNH publication at least every other year.

1.3 Initiate a new era of VMNH scientific research.

- Hire a new curator of paleontology.
- Establish a 3–5 year plan for paleontological collections growth and curation, as well as field work.
- Develop a concurrent budget for the 3–5 year paleontology plan that includes fundraising needs and grant opportunities.
- Establish a 3–5 year plan for recent invertebrate collections growth and curation, as well as field work.
- Develop a concurrent budget for the 3–5 year invertebrate

collections plan that includes fundraising needs and grant opportunities.

- Establish a 3–5 year plan for archaeological, geological, and mammal collections growth and curation, as well as field work.
- Develop a concurrent budget for the 3–5 year plans that includes fundraising needs and grant opportunities.
- Create job and collections descriptions for 3–5 potential curator positions that will enhance ongoing research, including funding needs.
- Include a state budget adjustment request annually focused on increasing the number of curator positions funded.

1.4 Communicate research processes and results to lay audiences.

- Grow, enhance, and promote public lecture series and double audience attendance.
- Create a budget and venue list for offsite lectures.
- Develop each research area's blog and promote.
- Generate a monthly podcast on average, and other media that is shared with print, radio, TV, and multimedia.
- Develop by 2016 an innovative plan to highlight our work in the dermestid colony; implement in 2017.
- Develop by 2016 two to three new avenues where curators can interact with the public; implement at least one in 2017.
- Develop by 2017 a guide to be used by teachers in areas other than science, such as English, where our gallery text can support non-science SOLs.

Interpreting Virginia's natural heritage

By 2020, the original museum exhibits at Starling Avenue will be 14 years old. Updates to technology and lighting, and an increase in density of the objects on display, will keep the museum relevant.

OBJECTIVE 2:

2.1 Incorporate new scientific discoveries in exhibits.

- Add 5 new cast or real skeletons to *Hall of Ancient Life* and the *Fossil Overlook*, and include updated signage and information.
- Augment *Wild Watersheds* with new specimens and new information about aquatic biota and our place in our watersheds.
- Identify and document areas of the museum in need of new specimens to increase the density of our exhibit areas.
- Identify 3–5 potential large corporate teams in Virginia who may be able to satisfy their corporate responsibility or advance their own agenda while advocating for the Museum Without Walls initiatives of VMNH.

2.2 Update electronic media.

- Replace existing projectors and screens with modern technology, and develop a budget for targeted needs in the galleries.
- Document areas in the museum galleries where sound may effectively augment the visitor experience (e.g., natural sounds or music); determine how best to incorporate sound.
- Utilize our distance learning lab technology to provide ongoing updates to electronic media throughout the museum.
- By 2017, develop at least 5 key storylines and highlight them through technology in the exhibit galleries, the museum Web site, and social media.

2.3 Transition VMNH lighting to LED or other technologically advanced system.

- Establish a task force composed of staff and members of both museum boards to evaluate lighting opportunities and needs.
- Conduct full museum survey of lighting, identify needs, and develop budget.
- Develop and implement exhibit policy for changing out incandescent bulbs to LED technology going forward.
- Identify areas of the museum, including galleries and collections storage spaces, that lack proper modern lighting and transition to LED for long-term cost savings and specimen protection.

2.4 Expand the visitor experience.

- From 2015–2016, develop a storyline that can be used to provide a self-guided electronic tour; in 2017, identify media platform needed for tour, develop budget, and initiate contact with a company specializing in that platform for museums.
- Design the exhibit information to take visitors through the galleries while exploring the specimens and artifacts through different topical lenses.
- Tie electronic solutions to local and statewide academic institutions via Web, mobile app, or other mechanisms.

A reconstruction of a 200-million-year-old phytosaur.

Inspiring learners of all ages

The museum will continue to engage audiences using traditional methods. However, we will augment our impact using modern technology to reach new audiences in new ways.

■ *Love the organisms for themselves first, then strain for general explanations, and, with good fortune, discoveries will follow. If they don't, the love and the pleasure will have been enough.*

— E.O. Wilson, Naturalist

OBJECTIVE 3:

3.1 Increase professional development opportunities for formal and informal educators.

- Research and document existing professional development programs and identify new opportunities for growth and additional offerings based on educational need and direction.
- Quantify funding and other resource needs. Identify potential collaborative opportunities to enable new and expanded teacher professional development programs.
- Develop promotional and solicitation materials to assist with fundraising efforts.
- Continue Math/Science Partnership grant with Hollins Elementary Science Institute for Teachers.
- Document potential options as new opportunities arise via National Science Foundation, Virginia Department of Education, and others.

3.2 Seek opportunities to reach more areas of the state through outreach education.

- Document current and future opportunities to support the outreach programs we have.
- Consider existing affiliate or partnering institutions, such as

Rockfish Valley Natural History Center, Martinsville and Henry County Historical Society, and Caroline County Visitor Center, for potential outreach education programming.

- Develop more statewide contacts to strategically identify potential educators, audiences, and locations.
- Document resource needs, such as staff salary and program seed funding, to launch new outreach programs.
- Explore possible partnerships and seek individuals who can provide financial or other support for existing and new outreach programs. Develop promotional and solicitation materials to assist with fundraising efforts.
- By 2016, develop a plan with programming themes that can engage Scouting organizations, and include a budget.

3.3 Utilize distance learning technologies for a strategic variety of existing and new museum programs.

- Leverage funding opportunities and seek new sources, such as the Smithsonian's Q?rius "Smithsonian Science How?"
- Develop and regularly update a Distance Learning Education Guide.
- Develop the capacity to produce "In the Wild" video programs that bring research and collections field sites to VMNH, classrooms, and other facilities.

Increasing visibility and public understanding of our mission



Using a mix of technological and person-to-person methods, the museum will serve its visitors, the state government, and the Martinsville/Henry County economy more effectively via customized service and tourism efforts. The museum's collections and the draw they create will be at the heart of this objective.

Shale, and a fossil of an aquatic lizard relative, Tanytrachelos, from Cascade, VA.

OBJECTIVE 4:

4.1 Connect the Distance Learning studio, its technology, VMNH marketing, and blogs

- In addition to making real time connections with virtual visitors and archiving podcasts and other media, develop a list of partners who will make VMNH electronic programming available through their resources.
- Develop programming that will highlight the Governor's natural resources goals, priorities, and successes that are updated annually.
- By 2016, document fundraising needs to support these activities.
- By 2016, develop a list of professional conferences the museum can link to programmatically with our Distance Learning Lab, and list ways in which we can enhance the conference; begin discussions with conference conveners in 2017.

4.2 Augment gallery interpretation using existing staff.

- During 2015, develop appropriate content that staff who interact with the public can present opportunistically on the floor.
- Train box office and security staff using lectures and role playing to appropriately interface with visitors, and provide them

with museum booklets with content for all galleries. This is the "Park Ranger" model to be developed and used by museum staff.

- Conduct pre- and post-test examinations of staff understanding of exhibits and visible laboratory content.
- Share widely with other institutions the benefits and successes of this model.
- Share with local partners in tourism, (concierge association, for example) and conduct pre- and post-test examinations to enhance their ability to promote VMNH as a destination.

4.3 Develop a mechanism to better promote Martinsville and the museum's Starling Avenue facility through off-site and traveling exhibits, and other statewide programs.

- By 2016, develop exhibit materials to be used off-site to highlight Martinsville and its other cultural resources.
- Secure multi-museum marketing concepts that highlight all cultural opportunities in the area. Work with regional tourism offices to make this happen.
- Begin discussions with museums and policy makers in the Martinsville/Roanoke/Danville/Greensboro/Winston-Salem areas to develop area-wide marketing concepts.
- Develop a budget for marketing and fundraising materials to support these efforts.

■ *Somewhere, something incredible is waiting to be known.*

— Carl Sagan

Expanding the role of VMNH in Virginia



The museum has an opportunity to establish a presence in an under-served region that is visited by 300,000 eco-tourists annually at the convergence of the Blue Ridge Parkway and Shenandoah National Park. With our Martinsville facility being the state's headquarters for natural history, the museum can use this location to create a wider influence on science and science literacy in the Commonwealth.

OBJECTIVE 5:

5.1 Examine and consider master plan for an offsite natural science interpretive center located in Waynesboro, VA and make strategic, financial, and fundraising decisions.

- Establish plan with defined boundaries of project (scope and finances) in 2015.
- List colleagues, collaborators, funding opportunities, and other resources available for future work.
- Develop budget for proposed work.

5.2 Identify scope of projects museum can work on in the area.

- Identify facilities for purchase based on decisions made during Master Plan analysis.
- Identify programmatic resources such as schools, potential outreach educators, offsite exhibit facilities, special event localities, and others that correspond with existing museum work.
- Identify collections-based priorities for area to aid local/regional interpretive opportunities.

5.3 By 2016, re-evaluate project based on programmatic, financial, collaborative, and other possibilities to determine ultimate scope of VMNH footprint near the Shenandoah National Park.

- Utilize Master Plan and data gathered on resources and finances to establish specific final objectives and goals.
- Develop a road map with timeline of 2016–2020 for final objectives and goals.
- Develop fundraising master plan with funds to come from multiple sources, but not impact work at Starling Avenue facility.
- Execute final plan and begin to quantify impact on the community via numbers served, revenue generated, and other measures.

Our 2+3 year vision

From 2012–2014, VMNH established itself as *A Museum Without Walls* whereby we improved our statewide reach while still maintaining and growing significant programs in science and science literacy at our Martinsville, Virginia facility. We now embark on our 2+3 year plan which includes significant work completed from 2015–2016 followed by a re-evaluation of progress and opportunities before we tackle projects from 2017–2020. This five year vision takes advantage of momentum generated during our last vision plan, and gears up staff and our boards to move forward with new opportunities, enthusiasm, and determination to reach further into the Commonwealth.

Virginia is rich in natural resources, some of which are not found elsewhere on Earth. The Big Levels Salamander (*Plethodon sherando*) is found only on a mountain top just south of Waynesboro. Fossils of the rare gliding lizard *Mecistotrachelos* are only present in rock layers near Cascade. The Virginia Beach Bug (*Phytocoris hoffmani*) is only known from the city for which it is named. Crystalline turquoise can only be found in Lynch Station.

I can't think of a better place to conduct the work of a natural history museum, and I can't think of a more ambitious and effective platform to do that work other than as *A Museum Without Walls*.

Joe B. Keiper, Ph.D.
VMNH Executive Director
May 2015

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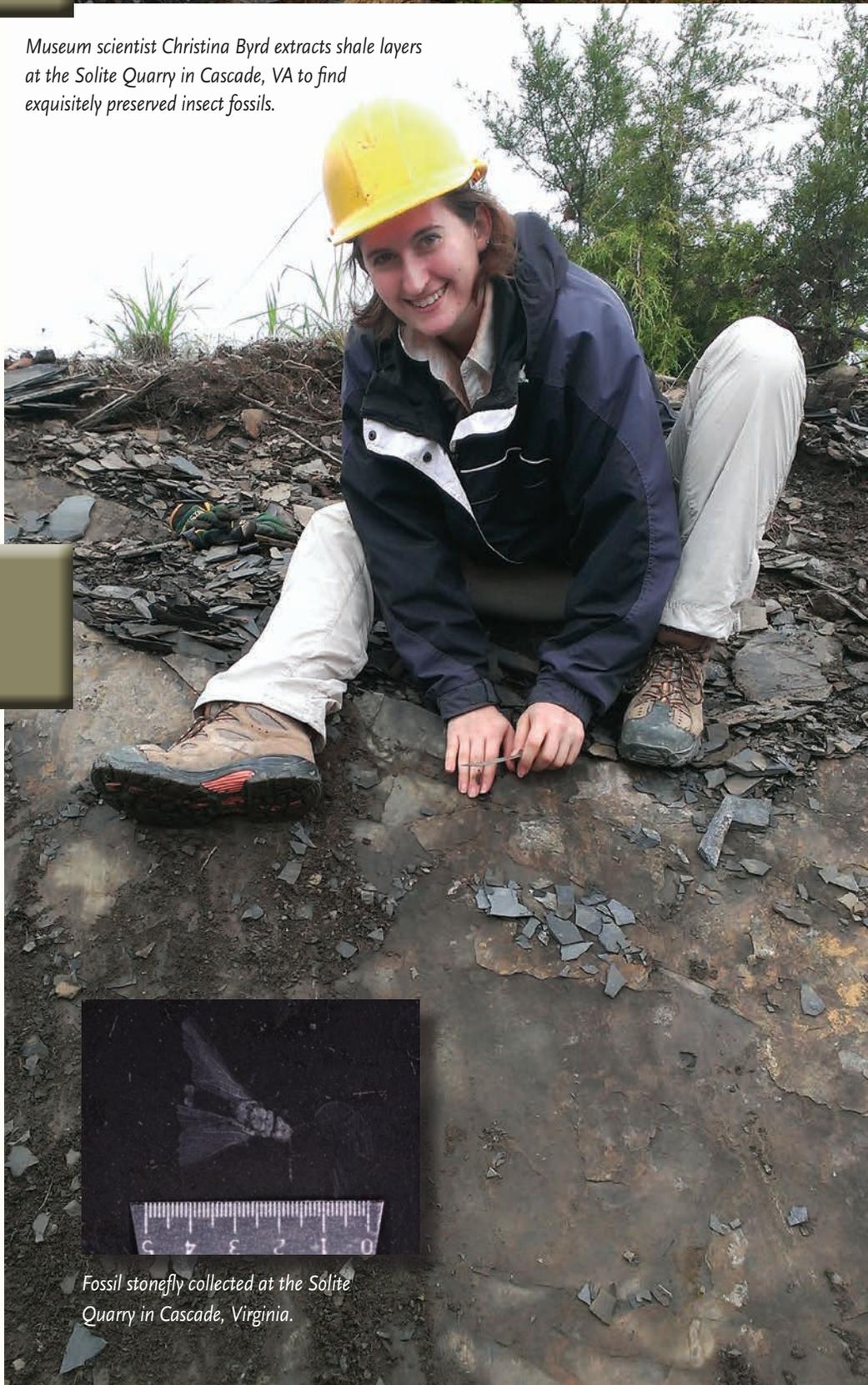
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Museum scientist Christina Byrd extracts shale layers at the Solite Quarry in Cascade, VA to find exquisitely preserved insect fossils.



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Fossil stonefly collected at the Solite Quarry in Cascade, Virginia.