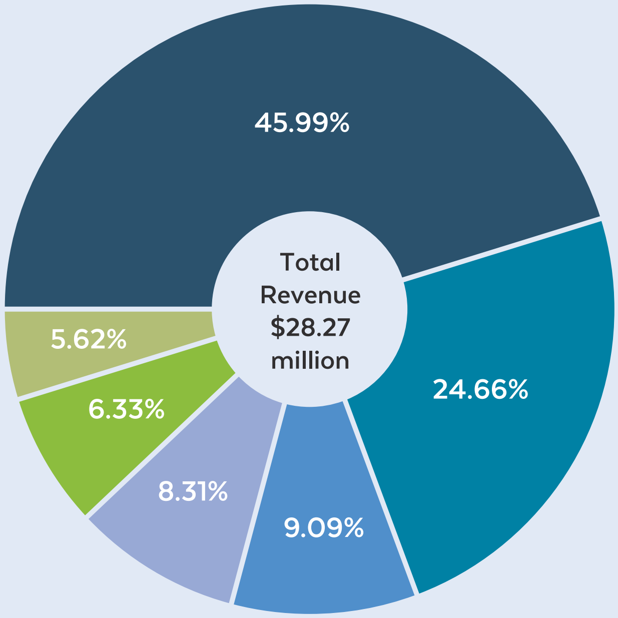
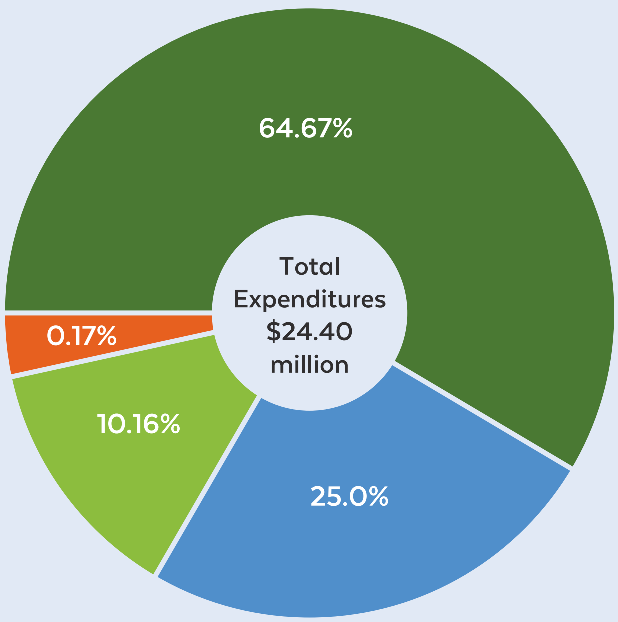
Florida Museum of Natural History
2018-2019 Annual Report

2018-2019 Financials and Impact by the Numbers



Revenue

UF/State allocation	**$13.0**	**million**	45.99%
Grants and contracts	**$6.97**	**million**	24.66%
Cash gifts	**$2.57**	**million**	9.09%
Earned income	**$2.35**	**million**	8.31%
Investment income	**$1.79**	**million**	6.33%
Other UF income	**$1.59**	**million**	5.62%
Total	**$28.27**	**million**	

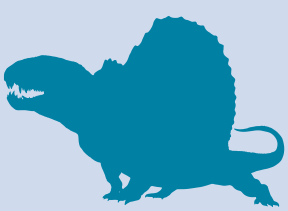


Expenditures

Salaries and benefits	**$15.78**	**million**	64.67%
Operating	**$6.10**	**million**	25.0%
Overhead/other fees	**$2.48**	**million**	10.16%
Transfers for future programming	**$0.04**	**million**	0.17%
Total	**$24.40**	**million**	

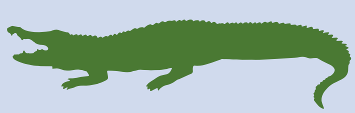
Featured Exhibits

Masters of the Night: The True Story of Bats



Permian Monsters: Life Before the Dinosaurs

Whale People: Protectors of the Sea



Crocs: Ancient Predators in a Modern World

Fundraising

$60.88M	Pledged to endowment
$27.98M	Total endowment value
$404K	Other pledges received

Attendance & Outreach

217,430	Annual visitation
173,869	Visitors to Museum traveling exhibits at other venues
35,445	Hours donated by 593 volunteers
21,879	Public Programs attendees
12,907	School program participants
7,864	Other community outreach participants
5,811	School outreach participants
3,917	News articles published with a potential viewership of 3.9 billion
2,938	Visitors to Pop-up Museum events
684	K-6 camps and classes participants
70	Teacher workshop attendees

Staff & Faculty Teaching

26	Courses taught by Museum faculty
92	Graduate committees chaired
159	Graduate committees served
117	Independent Studies supervised

Collections & Research

200	Peer-reviewed publications
1,081	Scientific and other visitors to collections
1,656	Collection loans of 36,584 specimens and artifacts
40+	Million specimens and artifacts
31	New grants and contracts worth $5.5 million
284	Undergraduates and postdoctoral fellows working in collections
22	Countries including the U.S. where Museum scientists conducted research
20	States including Florida where Museum scientists conducted research
97,387	New accessions to collections
480,774	New specimens and artifacts cataloged

Web Page & Social Media

7.95	Million Web page views
3.16	Million Web page visits
213,131	Pinterest followers
33,604	Facebook likes
9,858	Twitter followers
2,178	YouTube subscribers
6,727	Instagram followers

From the Director

Anniversaries are opportune occasions for individuals and institutions alike to pause and reflect on past accomplishments and to plan for the future. It so happens that each of our major Florida Museum facilities is observing a significant anniversary: Dickinson Hall (Research & Collections) – 50 years; Powell Hall (Exhibits & Public Programs) – 20 years; and McGuire Hall (Lepidoptera & Biodiversity) – 15 years. So it seems to be a propitious time to consider how far we've come and where we're heading.

Our collections and research enterprise is centered in Dickinson Hall. Here museum scientists produce new knowledge about our natural world every year and add to our scientific collections which have grown to over 40 million specimens, among the largest in the nation. We also own four warehouses and rent three others off-site as our collections continue to expand. And in a recent, exciting development, the University of Florida has committed to fund the construction of a new building on campus to house our extensive collections of fish, reptiles and amphibians, and invertebrates stored in alcohol. The state fire marshal has mandated these move out of Dickinson Hall. Hopefully next year's annual report will contain more details as construction plans progress.

It's hard to believe that Powell Hall is already 20 years old. **Nearly 4 million visitors have enjoyed the exhibits and educational programs since opening to the public.** The first "permanent" exhibit gallery in Powell Hall to be completed was *Northwest Florida: Waterways and Wildlife* featuring the iconic Florida cave. Now after two decades and lots of foot traffic, it is time to reimagine this space. Associate Museum Director Darcie MacMahon and her team, along with HealyKohler Design consultants, have created a compelling vision for this space that will tell the all-important story of Florida water and the challenges facing our most precious resource. We anticipate much progress in the year ahead.

We also are excited about plans for a major expansion to the front of Powell Hall. The new addition will house our Thompson Earth Systems Institute (described in last year's annual report) and include a high-tech theater/auditorium space. This has become a critical need for programming to larger audiences as most of our special events, exhibit openings and speaker series are standing-room only.

Finally, in the 15 years since it opened in 2004, our **McGuire Center for Lepidoptera and Biodiversity has grown to become the largest collection-based research and education center in the world focused on butterflies and moths.** Its Founding Director, Dr. Thomas Emmel, would be proud of the growth in collections, the productivity of the researchers, the outstanding undergraduate and graduate students working in the center, and the huge increase in Museum attendance that accompanied the opening of the *Butterfly Rainforest* exhibit. Next year we anticipate hiring new faculty and attracting additional collections.

So where do we go from here?

As UF continues to rise in the collegiate rankings, setting its sights on joining the top five public universities in the U.S., we will complement that aspiration by being one of the best university natural history museums in the nation.

Sincerely,

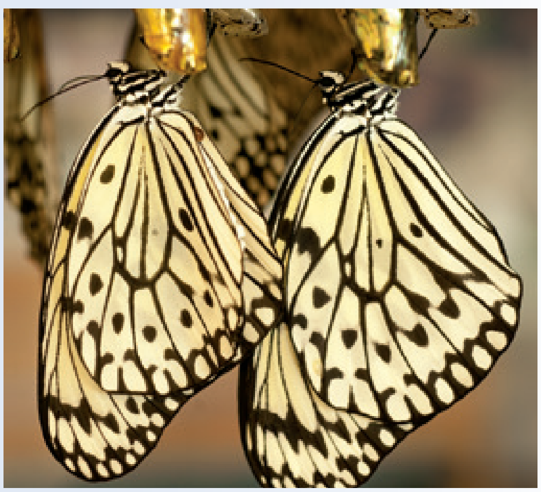
Douglas S. Jones, *Director*










Metamorphosis: McGuire Center celebrates 15 years of transformation, inspiration

In 2004, lepidopterist Thomas Emmel realized a lifelong dream by opening the doors of a new research center dedicated to butterflies and moths. It was a radical move in an era when many natural history institutes were shrinking their collections,downsizing staff or shuttering entirely.

In contrast, the Florida Museum's McGuire Center for Lepidoptera and Biodiversity housed a collection that soon swelled to millions of specimens, becoming a world-class research and conservation program featuring a public gallery and the *Butterfly Rainforest* exhibit, a nature experience that has mesmerized more than 1.5 million visitors.

Fifteen years after its inception, the center is the thriving research and education hub that its Founding Director Emmel, who died in 2018, and donors Bill and Nadine McGuire envisioned.

"Tom's vision and passion, along with the generosity of the McGuires, were responsible for making the center a reality," said Museum Director Doug Jones. **"The goal moving forward is to build on that solid foundation and continue to grow the center's preeminence."**

Looking toward the future, McGuire Center Director Jaret Daniels defines preeminence as stewardship. **The center houses more than 10 million specimens with dozens of additional collections added yearly.** Daniels's priority is ensuring that, once curated, these specimens are actively used for study, conservation and inspiration. Butterflies and moths offer scientists an ideal model system for tracking and analyzing environmental changes, and the center's collections provide snapshots of ecosystems across time, often of habitats that have vanished.

"Butterflies and moths hold such a wealth of information about life on this planet," Daniels said. **"They allow us to look back in time at how the world has changed and use that information to look at how future changes may affect the biodiversity on this planet and our own well-being. They can even help inform restoration efforts."**

As an international leader in the digitization of specimens – the process of making information about them available online – the Florida Museum has opened the center's vast archive to researchers, educators and laypeople around the world.

"Digitization allows us to answer big data questions in a way that wasn't possible before," Daniels said. "That's the area in which we can really make strides. And the way technology is changing in the molecular sciences, the value of these specimens is not just what we can do with them today, but what might be possible to learn from them in the future."

During the center's lifespan, the cost of sequencing genomes has plummeted and genetic technology has advanced to the point at which large-scale studies of butterfly and moth evolution, spanning hundreds of millions of years, have become feasible. McGuire researchers are diving deep into the history of these small animals, tracking their development alongside flowering plants and some of their key predators, such as bats.

Fieldwork – and sometimes close study of collection specimens – continues to reveal new species to science. The center's most comprehensive collections of butterflies and moths are from the Caribbean, the Neotropics, the U.S., Mexico and Mesoamerica, and Southeast Asia.

The center's conservation program has grown from a focus on Florida's endangered butterflies, such as the Miami blue and the Schaus' swallowtail, to a national purview, thanks to support from the Disney Conservation Fund.

And researchers are **inspiring and training the next generation of scientists** by planting butterfly gardens at local schools, recruiting junior volunteers to pin and label specimens, and working with undergraduate and graduate students on a host of research projects.

At a time when people are increasingly disconnected from wild spaces, Daniels sees butterflies and moths as charismatic ambassadors for the natural world.

"Butterflies and moths are a perfect gateway to engaging the public about why biodiversity is valuable and how we can preserve it. They offer us an incredible opportunity to have a lasting legacy."

Faculty and Staff Special Achievements

Jonathan Bloch received a University of Florida Term Professorship Award.

Charles Cobb presented the Patty Jo Watson Distinguished Lecture to the 2018 Annual Conference of the American Anthropological Association.

Akito Kawahara received a University of Florida Research Foundation Professorship Award.

Michal Kowalewski received a University of Florida Term Professorship Award.

Jacqueline Miller received the Albert Nelson Marquis Lifetime Achievement Award.

Larry Page was named a Fellow of the American Fisheries Society.

Pamela Soltis was elected President of the American Society of Plant Taxonomists.

2018-19 Peer-reviewed and Popular Publications

Allen, J.M., **R.A. Folk**, **P.S. Soltis**, **D.E. Soltis**, and **R.P. Guralnick**. 2019. Biodiversity synthesis across the green branches of the tree of life. *Nature Plants* 5:11-13.

Allen, J.M., **C. Germain-Aubrey**, N. Barve, K.M. Neubig, **L.C. Majure**, S.W. Laffan, B.D. Mishler, H. Owens, S.A. Smith, **W.M. Whitten**, J.R. Abbott, **D.E. Soltis**, **R.P. Guralnick**, and **P.S. Soltis**. 2019. Spatial phylogenetics of Florida vascular plants: The effects of tree uncertainty and ultrametricity. *iScience* 11:57-70. DOI:10.1016/j.isci.2018.12.002.

An, J., M. Zhang, and **G. Paulay**. 2018. New records of *Tylokepon* (Epicaridea: Bopyridae: Keponinae), with description of a new species. *Zookeys* 790:77-85. DOI:10.3897/zookeys.790.28134.

Arroyo-Lambaer, D., H. Chapman, M. Hale, and **D.C. Blackburn**. 2018. Conservation genetics of threatened frogs in the mountains of Nigeria. *PLOS ONE* 13:e0202010.

Austin, K.H., J.J. Dombroskie, **D.L. Matthews**, and **J.Y. Miller**. 2019. A review of the Archipini of The Bahamas with the description of a new species of *Argyrotaenia* Stephens (Tortricidae). *Journal of the Lepidopterists' Society* 73(1):5-17.

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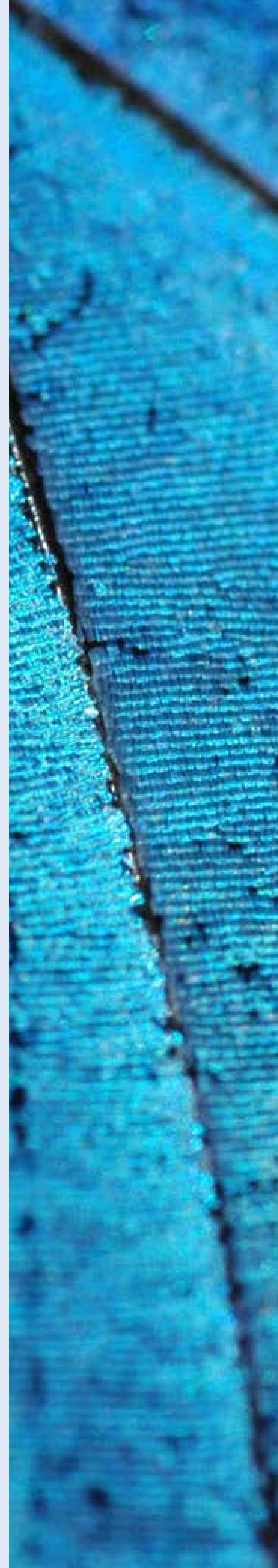
Barrios, D., E. Díaz, and **L.C. Majure**. 2019. Exploraciones botánicas a poblaciones de *Consolea* en Cuba: Estado de conservación y principales amenazas. *Journal of the Botanical Research Institute of Texas* 13:217-228.



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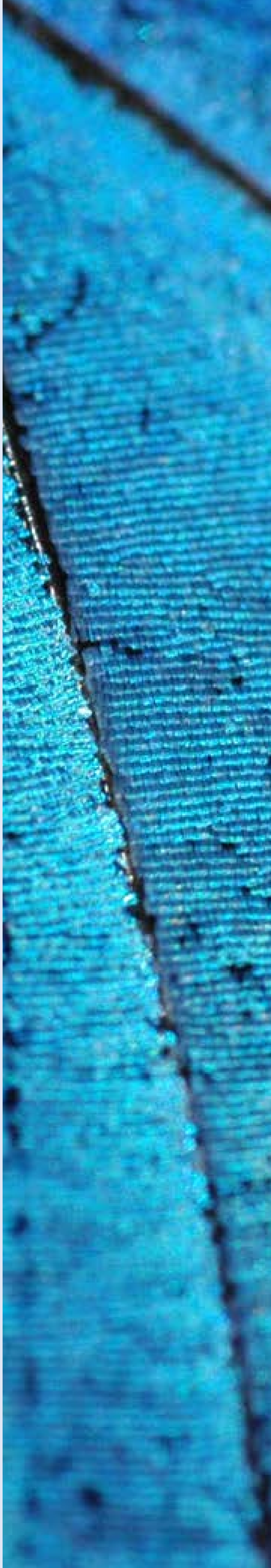

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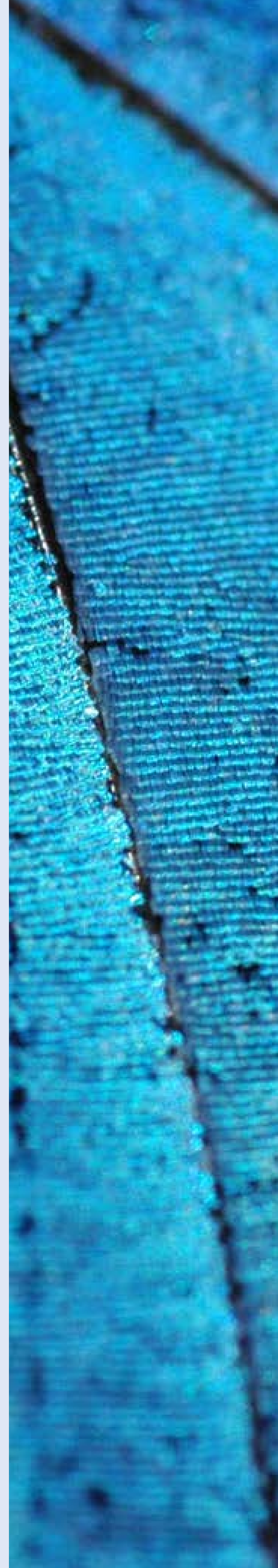

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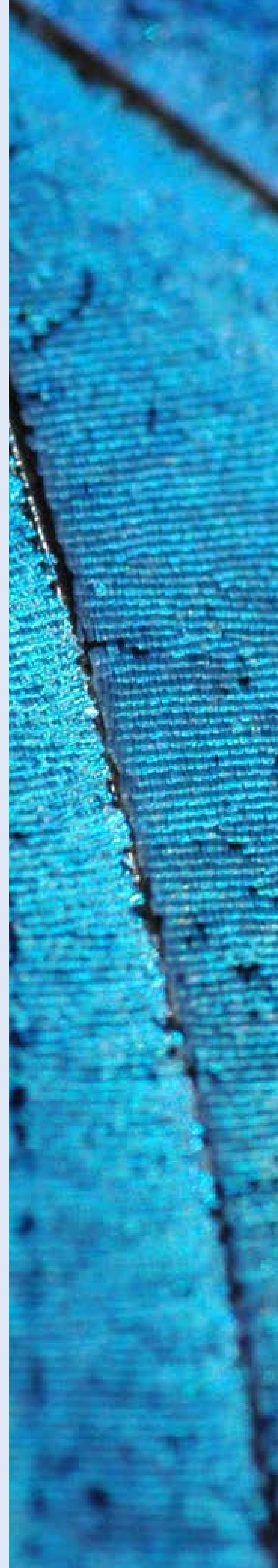

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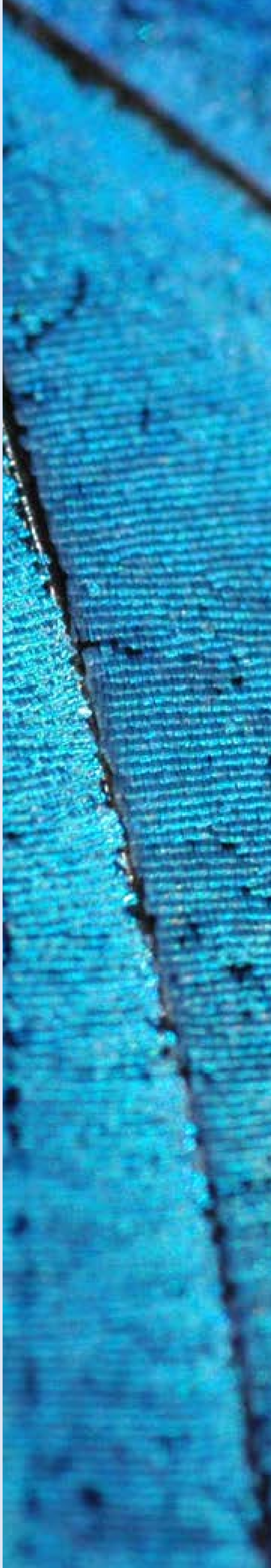

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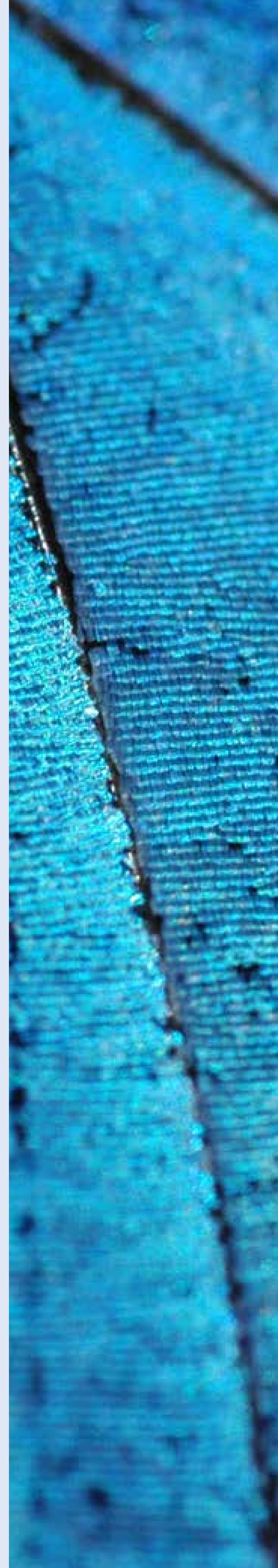

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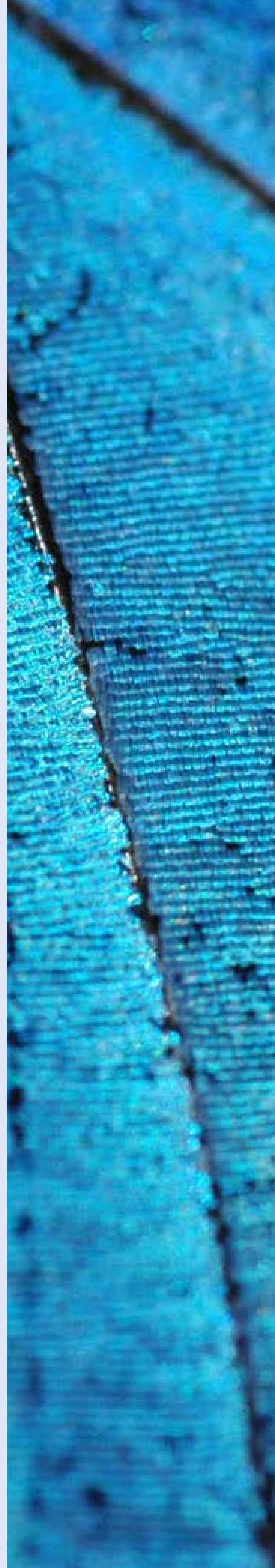

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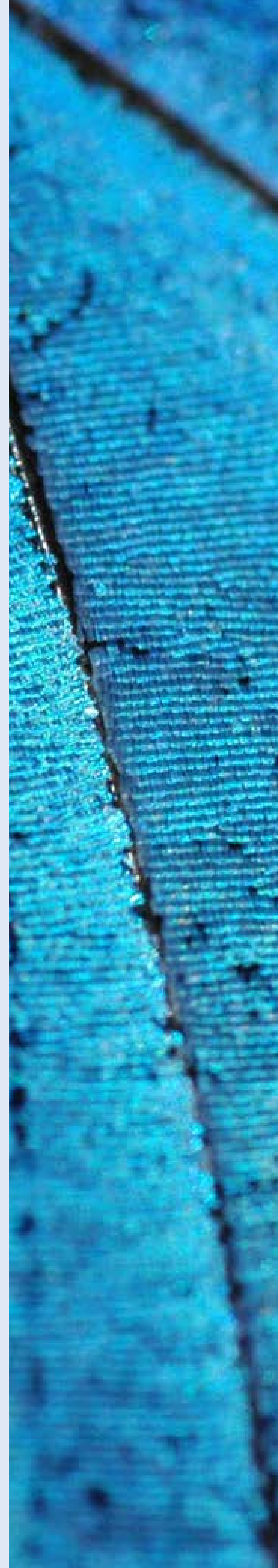

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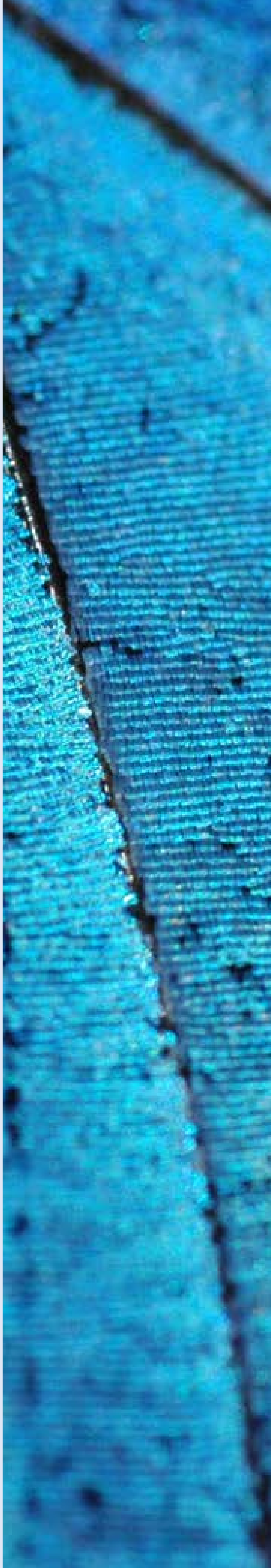

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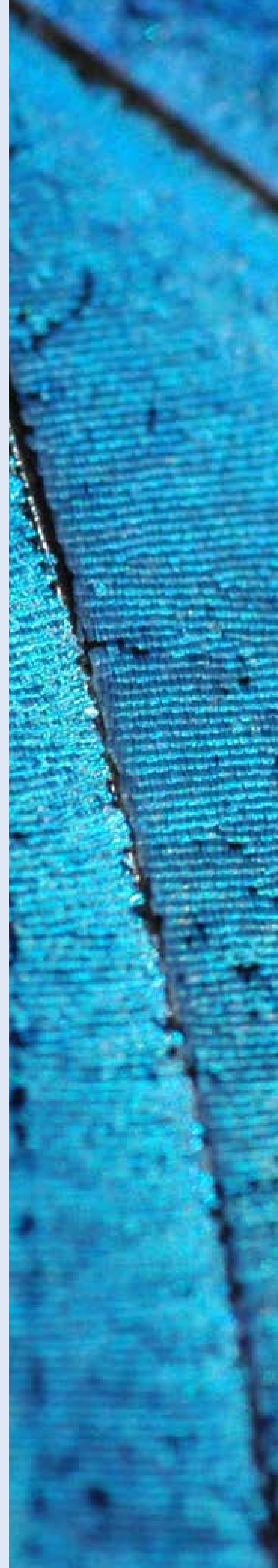

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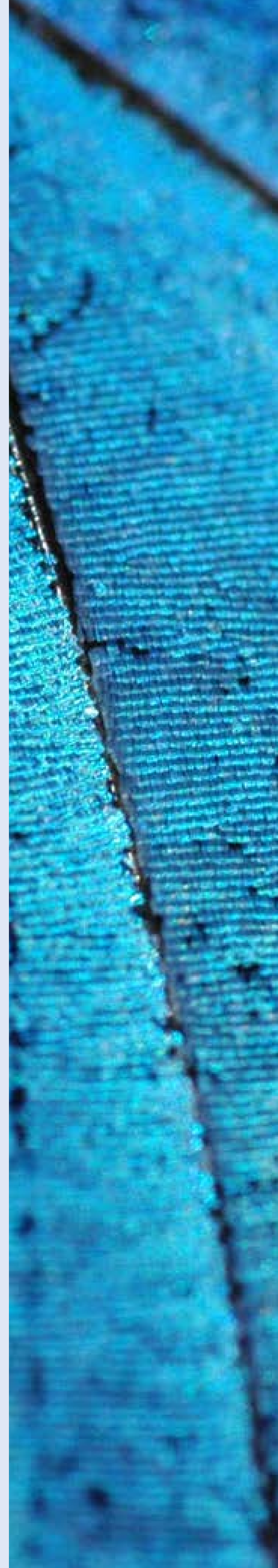

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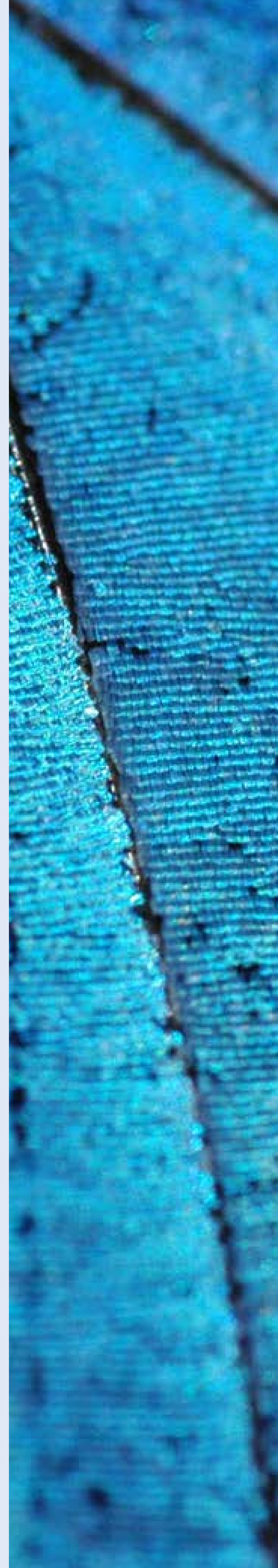

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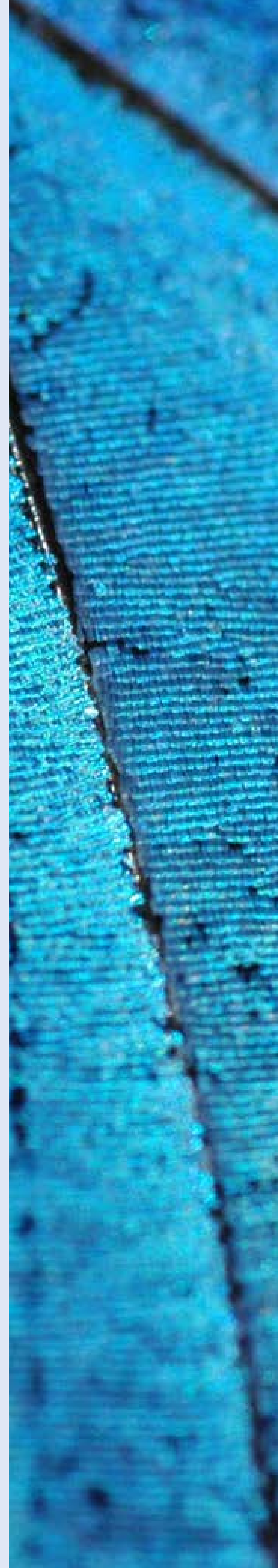

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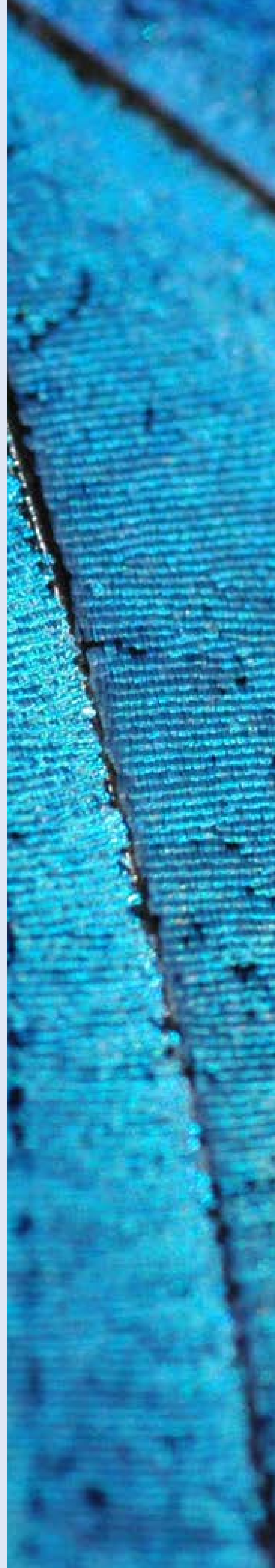

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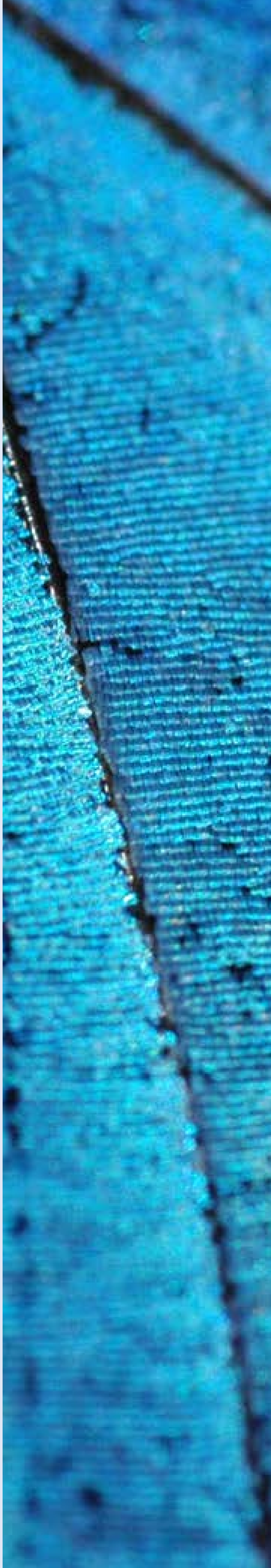

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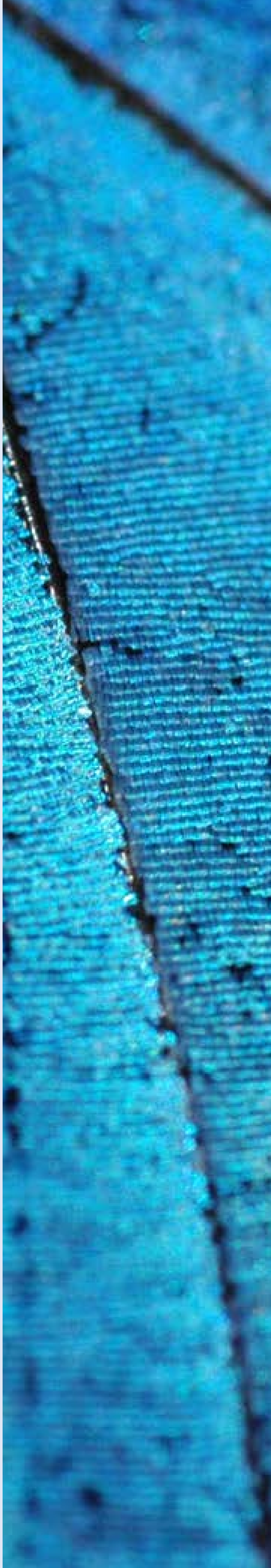

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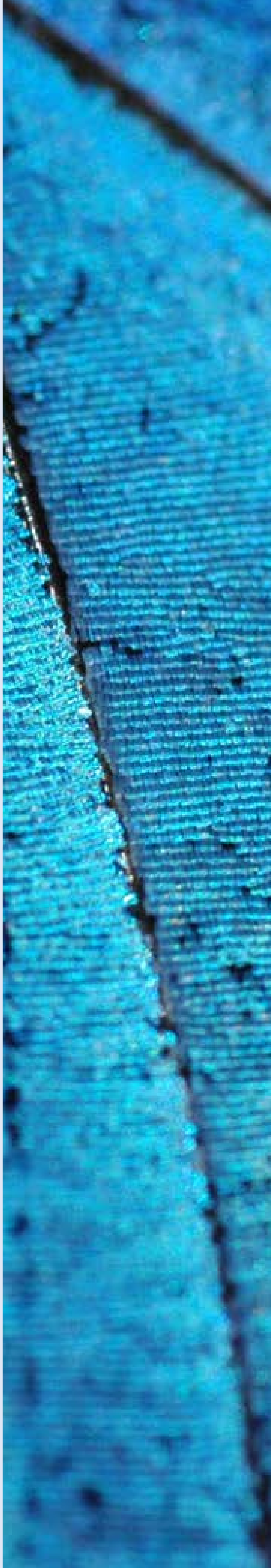

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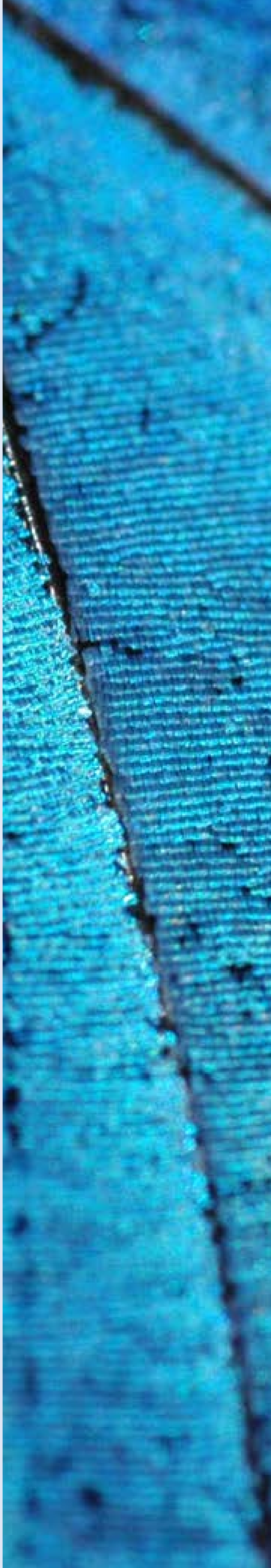

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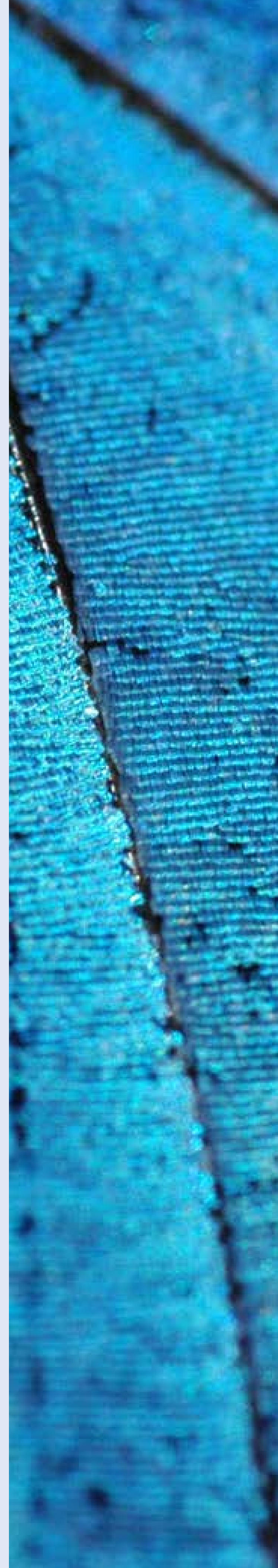

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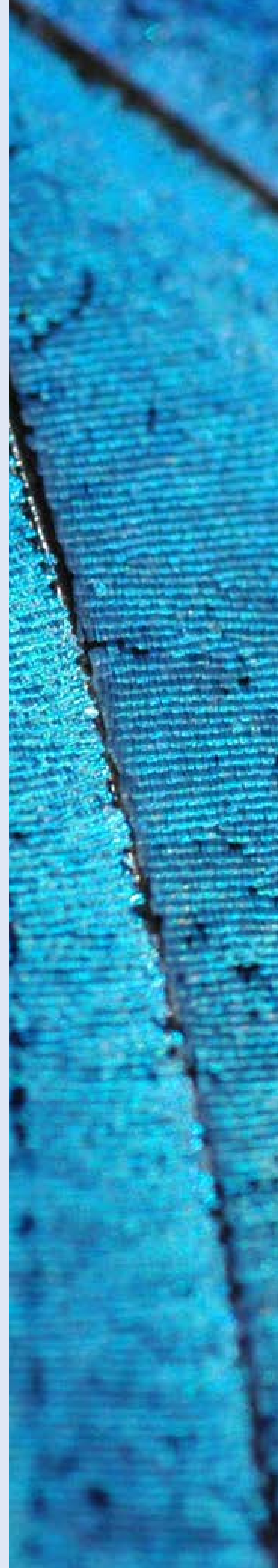

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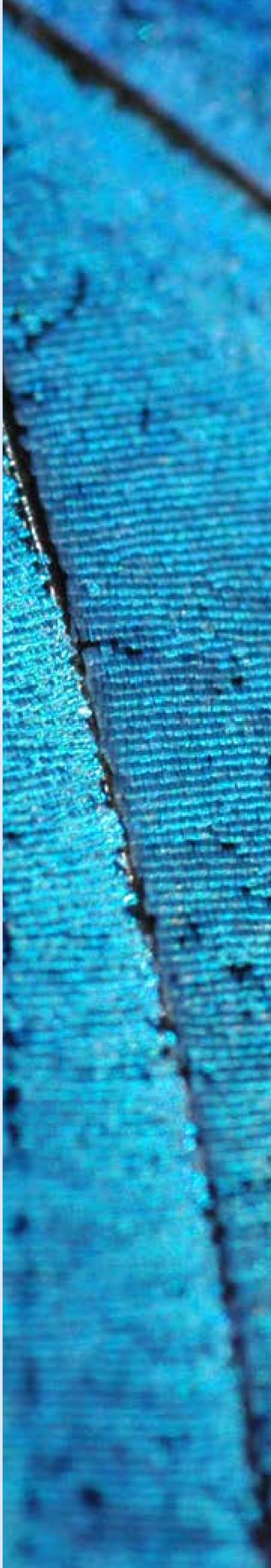

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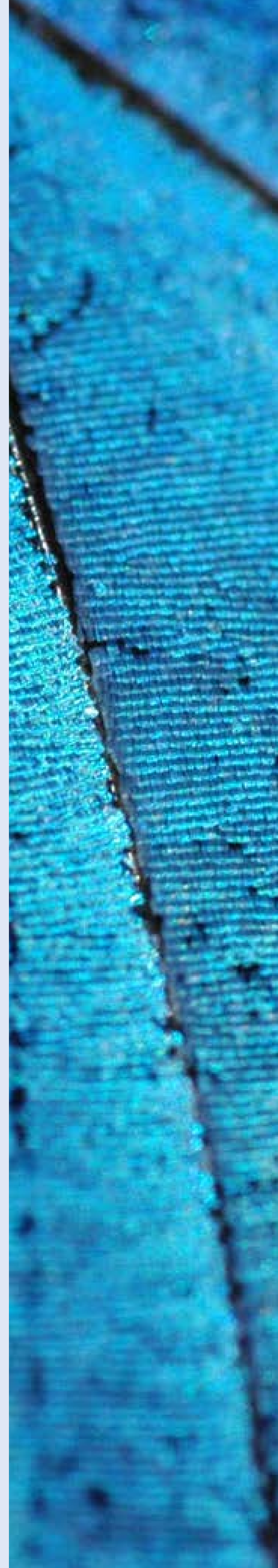

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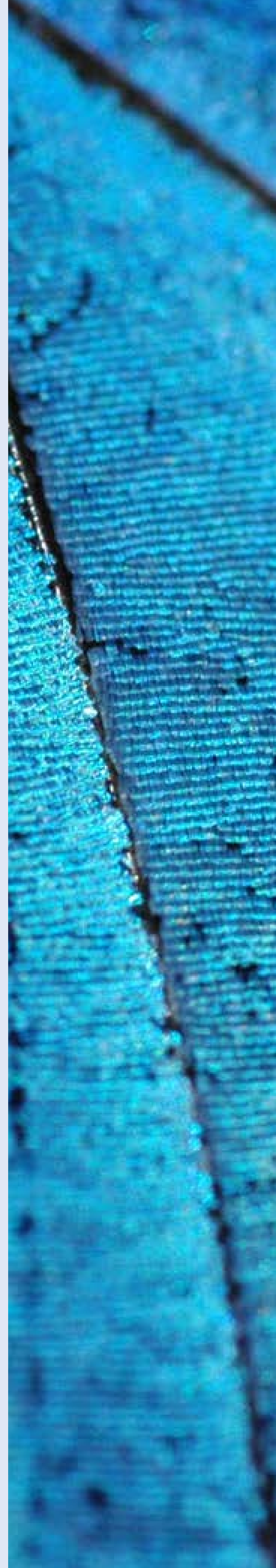

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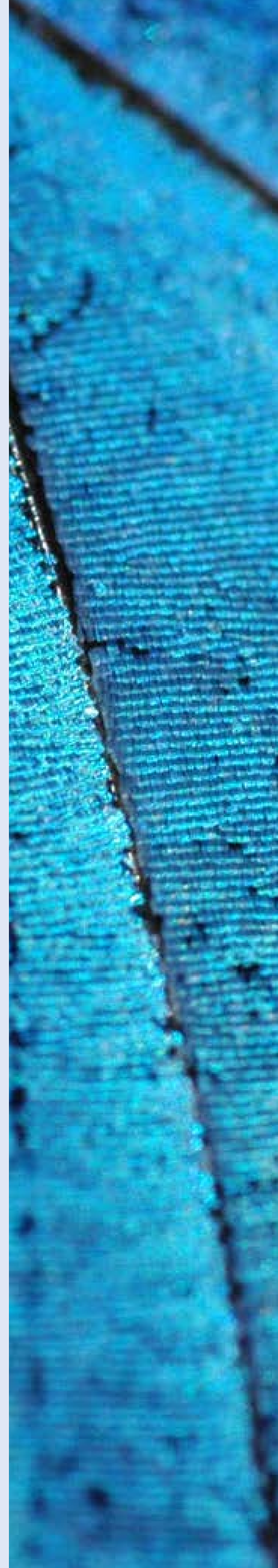

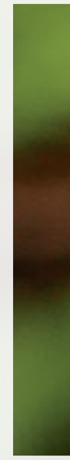

Inside photo page, clockwise from upper left: Museum lepidopterist Akito Kawahara, left, was featured on a PBS *American Spring Live* special that aired in April 2019. Docent Mary White works with Alachua County elementary students visiting the *Butterfly Rainforest* as part of the MentorGNV program. McGuire Center for Lepidoptera and Biodiversity Director Jaret Daniels releases monarch butterflies for guests at the Museum's *Tastes, Tunes & Treasures* event during the center's 10-year anniversary celebration in September 2014. McGuire Center Founding Director Thomas Emmel works in the Lepidoptera collection in 2009. Two newly emerged large tree nymph butterflies, *Idea leuconoe*, allow their wings to cure in the *Rearing Lab*. Lepidoptera Curator Jacqueline Miller takes a break from conducting fieldwork in Honduras. The Florida Museum and First Magnitude Brewing Co. introduced Migration Märzen, a German-style lager, during a special event at the brewery Sept. 15, 2017, to celebrate the annual fall journey of the iconic monarch butterfly. McGuire Center Senior Collections Manager Andrew Warren took this selfie during a summer fieldwork trip to Alaska in 2015. Lepidoptera researcher Geena Hill discusses butterflies with visitors during a Girl Scout "She's a Scientist" program. Millions of monarchs coat the fir forests while overwintering in the mountains of Mexico. McGuire Collections Coordinator Andrei Sourakov works with students attending the Museum summer Lep Camp in the University of Florida Natural Area Teaching Lab. McGuire Center Founding Director Thomas Emmel, from left, William McGuire, Museum Director Doug Jones and McGuire Center Director Jaret Daniels enjoy the Museum's *Tastes, Tunes & Treasures* event during the center's 10-year anniversary in September 2014. **Inside photo far right**: One of the endangered butterfly species the Museum is working to reestablish in the wild is Schaus' swallowtail. **Inside fold, right**: Museum researchers continue to work on restoration efforts for the Miami blue butterfly, which only inhabits remote islands in the Key West National Wildlife Refuge, including the Marquesas Keys pictured here. **From the Director**: Museum Director Doug Jones helped lead a group to Mexico to witness the overwintering of the monarchs in February 2019. **Front and back cover photos**: The Miami blue butterfly is considered one of the world's most endangered insects. **Florida Museum photos by Jeff Gage, Kristen Grace, Geena M. Hill, Deborah L. Matthews, Gillian Sweeney, Andrew Warren and Eric Zamora.**

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Florida Museum of Natural History
P.O. Box 112710 • Gainesville, FL 32611-2710