



APPLIED BIODIVERSITY SCIENCE
PERSPECTIVES SERIES

No. 5, October 2015

Texas A&M University

**Endemic Parrot
Conservation in
Dominica**

**The Elephants of
Botswana: Conflict
and Coexistence**

**Putting the “Applied” in
Applied Biodiversity Science**

Cover Art

Front Cover: Panorama from a canopy tower at Posada Amazonas Lodge where students from the ABS Amazon Field School were listening to the diverse birdsong in the early morning. Courtesy of Erin Buchholtz

Back Cover: This year's issue focuses exclusively on international biodiversity conservation issues and efforts. However, Texas is extraordinarily biodiverse, with ten ecoregions and numerous endemic species, none more iconic than the assorted species of Bluebonnets found throughout the state (*Lupinus texensis*, *subcarnosus*, *Havardii*, *concinus*, and *plattensis*).

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Applied Biodiversity Science Perspectives Series

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Communicating Action

Informing, improving, and influencing

Actionable science: *scholarship with the potential inform decisions at the government, business, and household level; improve the design or implementation of public policies; and/or influence public and/or private sector strategies, planning, and behaviors that affect the environment* (SESYNC, 2015).

George Gopen and Judith Swan wrote in their 1990 article for American Scientist that “the fundamental purpose of scientific discourse is not the mere presentation of information and thought, but rather its actual communication.” Although the accessibility and dissemination of science depends on effective communication, designing and initiating actionable research further facilitates the communication of science. That is, actionable science is paramount for the successful implementation of research by both public and private stakeholders and decision-makers.

We must maintain an awareness of the importance of actionable research as we continue to see the role of science shift from an exclusively academic domain to that of an amalgamation of academics, activism, political debate, and mainstream traditional and social media (Abrams, 2015). While conservation science has and will remain a problem-oriented science, this shift places an imperative on researchers to broaden their expectations for applied science. As the role of science changes, so too has the perception of science as purely academic pursuit; there is more of an impetus on and call for scientists to provide relevant answers and useful solutions that do not fit neatly within one discipline. This requires multidisciplinary collaborations and interdisciplinary perspectives. As the articles in this year’s issue can attest, the Applied Biodiversity Program at Texas A&M

promotes such collaborations and perspectives.

Although a gap between the social sciences and natural sciences remains, both sides have worked towards closing it over the decades and create an atmosphere that fosters, rather than impedes, the actionable potential of science. Likewise, the bridge between the social and natural sciences and the engineering and computational sciences has steadily grown. With these issues in mind, today’s conservation researchers and practitioners must cultivate an ability to effectively communicate not only their scientific findings but also the usefulness, relevance, and weight of those findings.

More and more, scientists are called upon to provide practical interpretation and guidance in conjunction with their results (Lupia, 2013) and access to data from publicly funded research (Arzberger et al., 2004). This stems not only from conservation science’s founding as a crisis-discipline and maturation into a problem-oriented discipline, but also on the fact that our work is, at times, directly linked to communities and peoples’ livelihoods. Developing research with actionable outcomes and outreach activities that aspire to give back to communities enriches this connection. Such an approach aids in the communication and dissemination of science, but also shows public and private stakeholders and decision-makers that conservation science is meaningful beyond the scientific domain. Perhaps it is cliché, but the enduring adage that our actions speak louder than words is worthy of our consideration as applied scientists.

Kenneth E Wallen

Welcome to ABS

New coordinator brings new stage to program



Dr. Patricia Baião

Patricia Baião has recently joined as the coordinator for Texas A&M Applied Biodiversity Science Program. She earned her Ph.D. from the University of Missouri-St. Louis (UMSL) in Evolution, Ecology and Systematics. For her graduate work she was interested in the extreme plumage polymorphism of the Red-footed boobies (*Sula sula*), that can range from mostly white to completely brown birds. She looked at the genetic basis of these phenotypes as well as selective pressures and evolutionary history events that could have contributed to the current distribution of these color morphs along the Pacific Ocean, but specially on the different islands of the Galapagos archipelago.

During her time at UMSL, she had the opportunity to work as an intern for the Missouri chapter of The Nature Conservancy (TNC) and decided that she would make a career choice in the conservation workforce, applying her strong science foundation to real conservation issues on the ground. After she graduated, she returned to her home country of Brazil and started working as the Amazon Program director for Conservation International (CI), based in Belem, Pará.

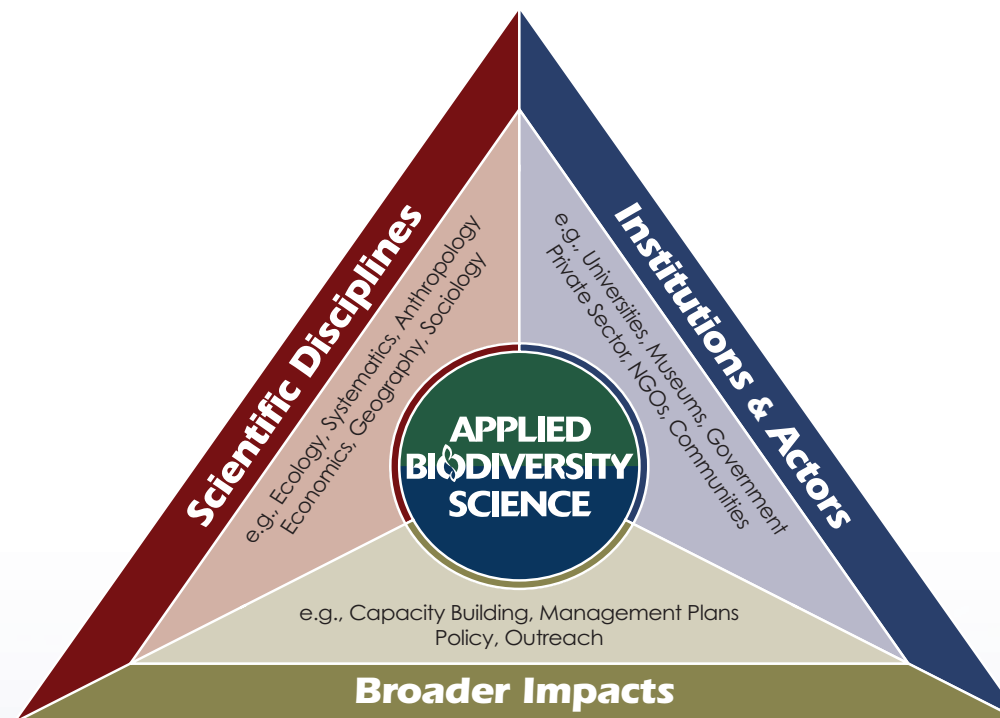
While in this position, Patricia worked closely with local governments and communities to develop sustainable development pathways. She believes that local development depends on conserving the natural capital (forests, ocean, savannahs, etc.), building strong local capacity that translates into local governance and leadership, developing sustainable economic chains that can provide income and improve livelihoods, and amplification of best practices through sound policy at all levels. These elements are only possible when there is an effective legal framework, with environmental friendly legislation that is enforced.

With CI, Patricia moved on to work as the director of the policy team to amplify best practices into public and corporate policies using CI’s successful experiences in the field. In this position, she was responsible for liaising with national and local governments in Brazil, other NGOs, and networks and represented CI-Brazil in the United Nation Framework Convention on Climate Change (UNFCCC) and in the Convention on Biological Diversity (CBD).

Some highlights of her career are the implementation of the Amapa Biodiversity Corridor in northern Brazil, which covers more than 70 percent of the state of Amapa, the creation of the Observatory of the Brazilian Forestry Code, and the creation of the Kayapo Endowment Fund. She has published several scientific papers and has received various scholarships and awards.

APPLIED BIODIVERSITY SCIENCE

The vision of the Applied Biodiversity Science (ABS) Program is to integrate biodiversity research and on-the-ground conservation practices.



The ABS Program's Three Pillars

Research in Natural and Social Sciences

Collaboration with Conservation Institutions and Actors in the Field

Application of Conservation Theory to Practice

Research teams of students and faculty collaborate with international partners in one of four regions of Latin America. They develop complementary dissertations related to:

- Ecological Functions and Biodiversity
- Communities and Governance



Bridging Ecology, Culture, & Governance for Effective Conservation

The Applied Biodiversity Science NSF-IGERT Program is open to all doctoral students at Texas A&M University.

ABS Program Integrative Activities:

- Multidisciplinary graduate curriculum
- Amazon field school
- Annual research conference
- Cross-cultural leadership training
- Seminar series and journal club
- Internships at host country institutions

**Funded
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See the ABS website for application information and deadlines.



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CONTINUED FROM ON THE PATH TO RECOVERY

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Special Thanks

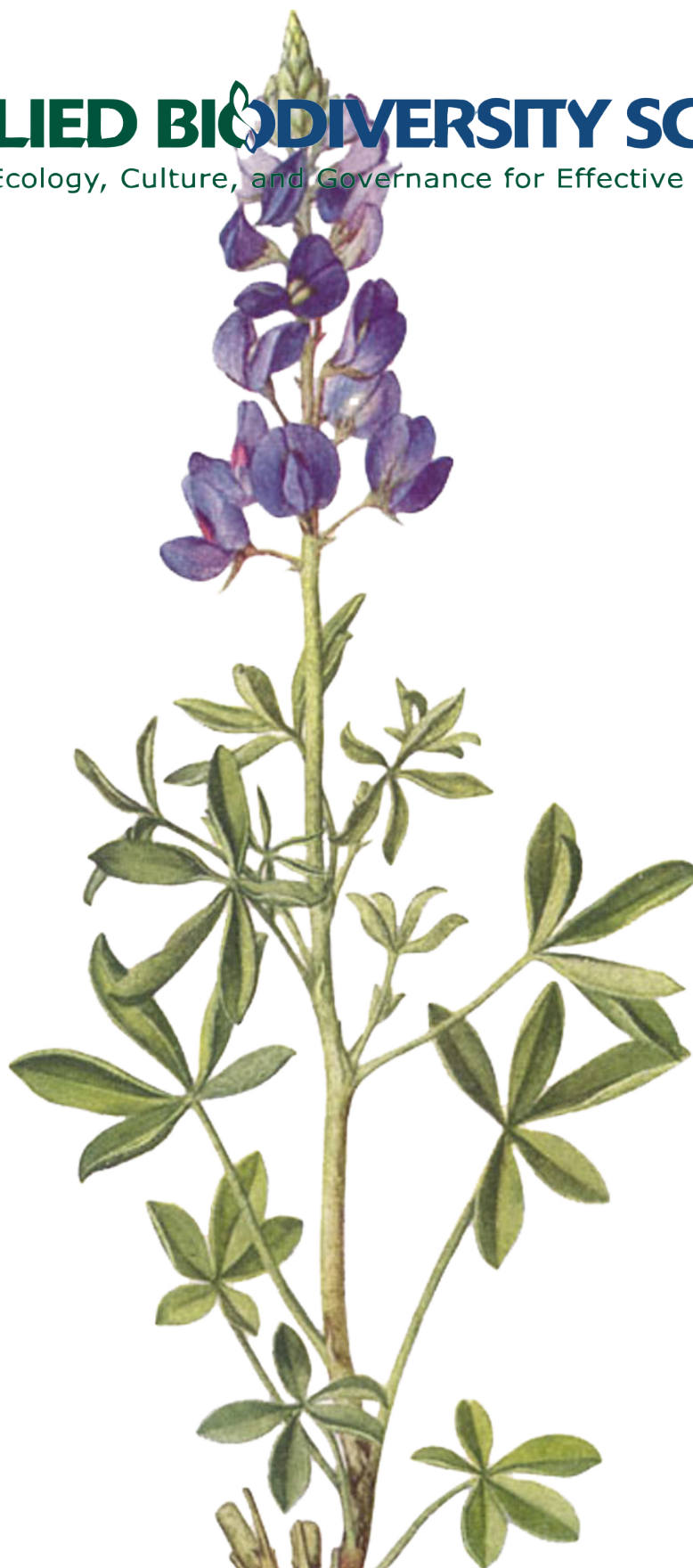
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Likewise, this year's issue is not possible without all of our contributors and their dedication to communicating the science of biodiversity conservation.



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