The Pilot of Minorities in Environmental Biology and Natural Resource Sciences

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The Great Questions:

- Why are there limited minorities in Environmental Biology and related Natural Resource fields?
- What are the barriers to minorities in natural resource fields?
- How can we address these barriers?
Historical Perspective: Minorities in Environmental Biology and Related Fields

- Pre-colonial 1600s - Indigenous Land Ethic & Seven Generational Impact
- 1700s - Phillis Wheatley, Harriet Tubman
- 1949 - Aldo Leopold, A Sand County Almanac, founder of Ecology
- 1980s - Environmental Justice Movement
- Where are we now?

Protestors block the delivery of toxic PCB waste to a landfill in Afton, North Carolina, 1982. NRDC, Ricky Stilley
Where are we now....

Randy Moore, Chief US Forest Service; Angela Coleman, Associate Chief USFS
Where are we now......

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Myth versus Reality...
Dale Bosworth, Chief USFS 2001-2007

…”There’s a myth that the people who built our nation were white—that the first pioneers and settlers were white—that the first people who cared for our forested landscapes were white. The truth is more complex. People from all races built this country, and African-Americans played a crucial role. For centuries, African-Americans have helped develop our natural resources—as explorers, as pioneers, as farmers, as foresters, and as conservationists. African-Americans have a rich history of caring for the land and using it to serve people.”

Blacks in Government, Forest Service Forum
New York, NY
— August 22, 2006
Why are there limited minorities in Environmental Biology and related Natural Resource fields?

- Not a lack of Interest in natural resources
- Three Main Barriers:
  - Inequitable Opportunity for Exposure
  - Lack of retention due to hostile culture
  - Lack of Recruitment of Minorities
Addressing Barriers: Inequitable Opportunity for Exposure

- Exposure is KEY!
- Equitable Exposure is Lacking
  - Early Exposure K-12
  - Majority of minorities are coming Urban environments
    - Clean air, water, quality and quantity food, climate change, birds - WORKS!
    - Endangered species in a far land - No!
    - Messaging must be appropriate based on current life experiences before branching in other areas of interest
Addressing Barriers: Inequitable Opportunity for Exposure

- Undergraduate Volunteer Opportunities vs Paid
  - Minorities students often hold responsibility of their own livelihoods and expected to assist their parents
  - Students must earn money in the summer
  - Volunteering is simply not acceptable, thus minorities students often lack early career experience and skills
    - Rethink: Experience preferred but not required
    - Charisma and Passion Rare Species does not pay tuition & fees
    - Not be the Tiger King: Opportunities Must be Paid Opportunities
    - Passionate students deserve passionate pay
Addressing Barriers: 
Inequitable Opportunity for Exposure cont.

- Cover Travel & Housing Expenses/Arrangements to Opportunities
  - Students (or parents) often lack a major credit card
  - Reimbursement is not acceptable

- Equipment Expenses
  - Boots, tents, binoculars and camp stoves all cost equal or greater than a textbook, but cannot be purchased with a book voucher ($500-800 per student)
Addressing Barriers: Inequitable Opportunity for Exposure

- **TAKE HOME #1**
  - If you ignore the realities of the role of economics and the inequities of exposure, you are indelibly selecting only students from high middle class/wealth families.
  
  - You are excluding many minority students as well as poorer white students
Addressing Barriers: Lack of Retention due to Hostile culture

- Natural Resource / Ecological Culture
- Wealth and Economic Differences
- Academia Cultural: First Generation vs. Multigenerational
- Historical Racial Issues

Are you unintentionally creating a hostile environment?

8 SIGNS OF A TOXIC WORK ENVIRONMENT

1. You're overburdened with work all the time
2. There is no clarity about organizational vision or mission
3. You don't get any appreciation for your work
4. Gossips and incivility are tolerated or encouraged
5. Discrimination and injustice on various grounds
6. Taboos against expressing your opinions
7. Unhealthy or dysfunctional competitions
8. Poor communication

However, you don't have to quit your job if you identify these signs with your workplace. There are always ways to turn your organization into a positive one.
Belonging in Ecology: Self Identity

Ecology and natural fields have cultures that are opposite of (or opposing to) the identity and cultural norms that are designed to protect minority students.
Question: Why a lack of belonging in ecology?

- Sportsmen or hunt lodges = racialist clandestine activities
- Being in the woods or alone with a large group of men = unwanted sexual advances
- Elitist Fundraisers/Parties = You will be displayed as a token/ or “Unicorn Affect”
- Opening mocking faith or conservative values
- Questions about family history or family structure
- Work socials are often held at bars and breweries
- Exclusivity as a weapon = collaborations and opportunities are born from unofficial social gatherings where outsiders are least likely to be present.
Addressing: Retention through Belonging

- Goal to increase exposure and retention creating an more inviting culture in ecology and natural resource fields.
- Cancel Repeat Abusers: Do not allow students to be exposed to inappropriate or predatory colleagues (physical, mental, emotional or sexual)
- Orientation: Creating the Summer Culture
  - Weekly check-ins are required
    - Be interested in the whole student
    - This develops trust - openness about concerns
  - Remote Area: promote team schedule for resource runs (grocery store, pharmacy)
    - Eliminates Pecking Order
  - Social outings not centered around alcohol or bars
- Cancel Isolation- Think Pairs: students without peers from similar backgrounds (minorities) will feel isolated.
  - Isolation creates high levels of anxiety, questioning of qualification and lack of self confidence.
Addressing: Retention through Belonging

- **TAKE HOME #2**
  - The burden of creating a cultural of belonging is on all of US... not minority students.

- By intentionally designing programs that eliminated isolation, abuse, and pecking orders, we will be successful at retaining students in the fields of environment, natural resources and related sciences.
Addressing: Lack of Recruitment

- The largest pool of minorities majoring or interested in natural resources are at minority serving institutions.
  - HBCUs, LatinX, and Native American Institutions
  - There are mostly agricultural land grant and liberal arts institutions
    - Applicants are less likely have a natural resource major:
    - More likely: plant science, soil science, animal science, biology, agro- or urban forestry
    - Less likely: environmental science, wildlife, forestry, natural resource
  - However, there are HBCUS and minority serving institutions with natural resources majors.
Just to name a few......

- Tuskegee University
- Alabama A&M University
- Florida Agricultural and Mechanical University
- Southern University
- Hampton University
- North Carolina A & T State University Carolina
- Morgan State University
- Fort Valley State
- Bethune Cookman University
Addressing: Lack of Recruitment

- **TAKE HOME #3**
  - If you do not actively recruit at minority serving institutions, then you are not really interested in increasing diversity of applicants applying to your natural resource programs.
  - No excuses... just recruit

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Thank you ...... Questions?

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