Educating Students by Experience and Adventure

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Mendenhall Student Center
How Did I Get Here?

- I came to East Carolina University in August of 1983. I was an Assistant Scientist in the Institute for Coastal and Marine Resources – now the Institute for Coastal Science and Policy.

My Research Interests:

- Evolution and Ecology of Diadromy –
  - Anadromy – striped bass, shads and river herrings, sturgeon
  - Catadromy – American eel
  - Critical habitat assessment
  - Fish passage
  - Life history aspects
- Long Distance Migration –
  - Striped bass, shads and river herrings, spiny dogfish shark
- Trace Element Signals in Coastal Watersheds –
  - “watershed fingerprinting”
Teaching

• Teaching – I love to teach both graduate students and underclassmen and to involve them at all levels of the college experience.

• Today's methods and techniques present many challenges to instructors – distance education, white boards, projected lectures from computers, and yes – even adequate cell phone coverage.

• Whatever happened to slide projectors and good ole chalk boards?
Courses Taught in Last Five Years

- Intro to. Fisheries Management (BIOL 3550, 4550)
- Fisheries Techniques (BIOL 5600/5601)
- Current Topics in Coastal Biology (BIOL 5680)
- Advanced Fisheries Techniques (BIOL/CRM 7011)
- Graduate Marine Biology (BIOL 7020/7021)
- Fisheries Literature (BIOL 7350)
The 21st Century Student

- Students hate/love to see themselves in action. “Don’t take my picture... Oh hey, look at me!”

- Students crave to have a closeness to a mentor, someone more than a teacher on MWF (i.e., do the students actually KNOW your name?)

- Students can’t relate textbook information to real life experiences – “I’ll never use this.”

- Students have lost the necessity to take notes (posting notes, Blackboard, PowerPoints, etc.)

- Students do not know how to roll up sleeves and “Git ‘er done!”

- Students want to meet people that can help them in the job market, but don’t know how to make this happen.
"It was hard to sit and listen to somebody talk. I wanted to be out, educated by experience and adventure, and I didn’t know how to express that.”

How I Incorporate Scholarly Activities into Teaching

- Take lots of photos!
- Use real data to connect textbook with real life situations.
- Translate the textbook to real life experiences.
- Involve students in professional societies and professional meetings to network with future peers.
- Bring alumni, former graduate students, and professionals to campus to lecture/relate life experiences.
- Facilitate undergraduate experience and adventure with internships and work in your laboratory.
- Humor
Take Lots of Photos!
Use real data to connect textbook with real life situations

Population Size Class Structure

Hatteras-Kitty Hawk, 98-99

FEMALES
- Mean: 21.3 cm
- Standard deviation: 4.6 cm
- Minimum: 12 cm
- Maximum: 18 cm
- n = 1133 fish

MALES
- Mean: 17.3 cm
- Standard deviation: 3.4 cm
- Minimum: 9 cm
- Maximum: 20 cm
- n = 1133 fish

Hatteras-SC, Feb-Mar 1999

FEMALES
- Mean: 41.6 cm
- Standard deviation: 4.5 cm
- Minimum: 26 cm
- Maximum: 60 cm
- n = 1133 fish

MALES
- Mean: 36.5 cm
- Standard deviation: 4.1 cm
- Minimum: 24 cm
- Maximum: 56 cm
- n = 1133 fish

Figure 4: Percent total length (cm) frequency of male and female spotted eagle rays captured from Hatteras to Kitty Hawk, North Carolina during the winter of 1998-99 onboard the R/V Tilly.

Figure 5: Length frequency (TL, cm) of male and female spotted eagle rays captured in coastal waters south of Cape Hatteras, North Carolina to the eastern coast of Florida during the winter of 1998-99.
Translate the textbook to real life experiences.

Weekend field trips sampling water quality and wildlife

Kick seining in Green Mill Run
Involve students in professional societies and professional meetings to network with future peers.
Bring alumni, former graduate students, and professionals to campus to lecture/relate life experiences.


Commercial fisherman from Wanchese, NC
Facilitate undergraduate experience and adventure with internships and work in your laboratory.
Many thanks to my colleagues of the Biology Department for the nomination!

Thanks to all of my great students over the years for putting up with my life stories and goofy photos.