



Five minutes in an elevator at 30000 feet

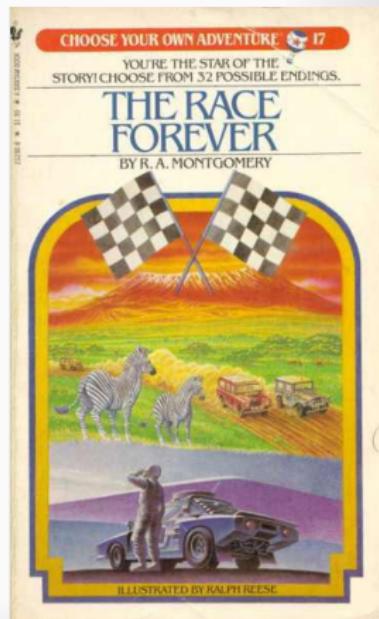
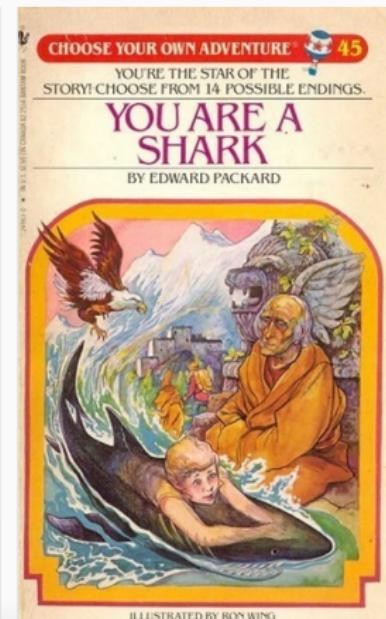
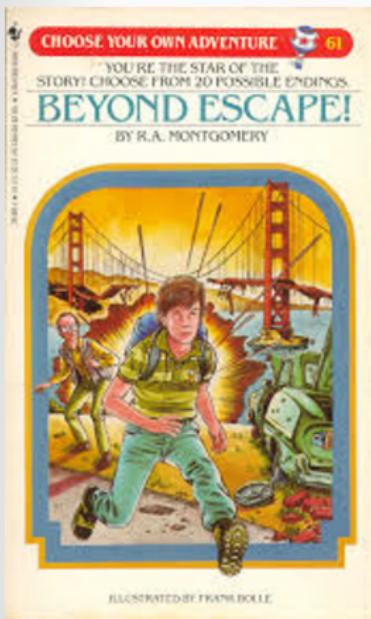
Marcus W. Beck

¹USEPA NHEERL Gulf Ecology Division
Email: beck.marcus@epa.gov

July 27, 2016

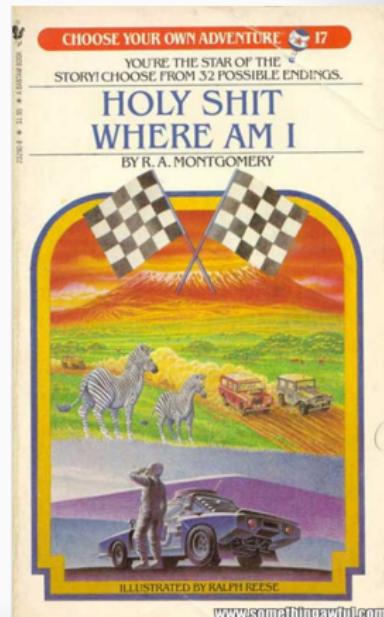
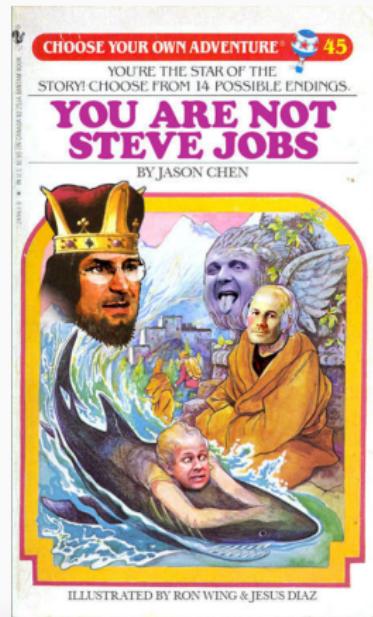
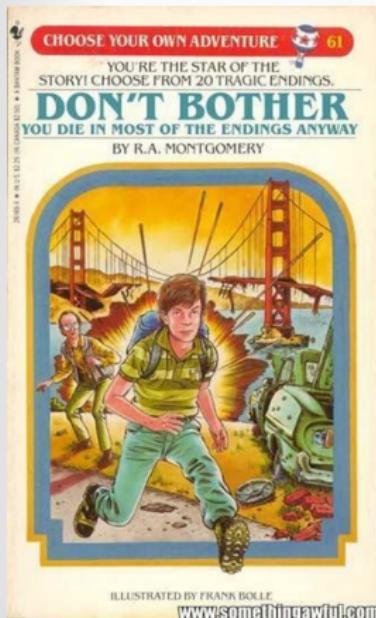


Choosing your own adventure





Choosing your own adventure





Choosing your own adventure

13 years old

1. Learn to fly
2. Join Air Force
3. Fighter pilot/
professional
skateboarder



Choosing your own adventure

13 years old

1. Learn to fly
2. Join Air Force
3. Fighter pilot/
professional
skateboarder

20 years old

1. BSc in Zoology
2. Intern for FWC
3. MSc in
Conservation
Biology
4. Fisheries
Biologist



Choosing your own adventure

13 years old

1. Learn to fly
2. Join Air Force
3. Fighter pilot/
professional
skateboarder

20 years old

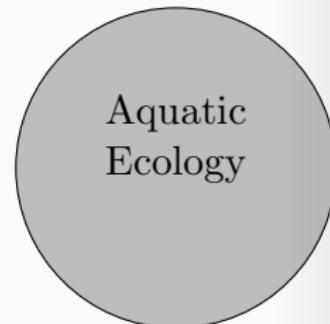
1. BSc in Zoology
2. Intern for FWC
3. MSc in
Conservation
Biology
4. Fisheries
Biologist

30 years old

4. Intern for
MNDNR
5. PhD in
Conservation
Biology
6. ORISE post-doc
7. Fed post-doc

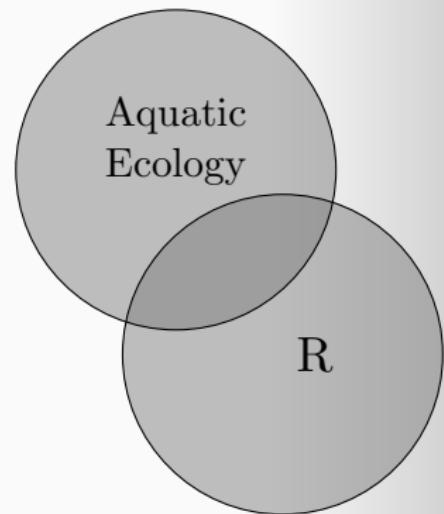
Elements of the adventure

- Water quality
- Biological monitoring
- Eutrophication
- Aquatic Macrophytes
- Ecosystem metabolism



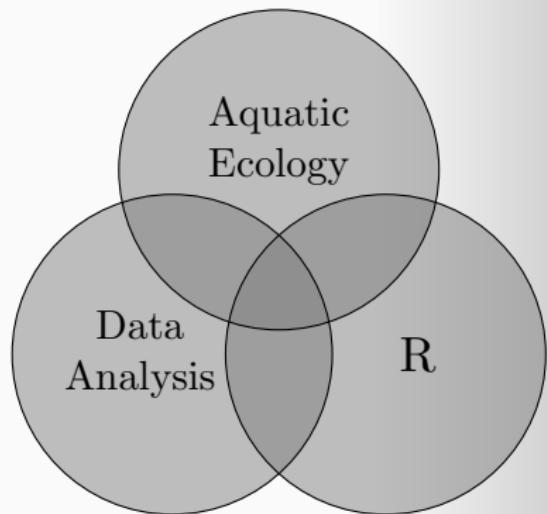
Elements of the adventure

- NeuralNetTools
- SWMPr
- WtRegDO
- WRTDStidal
- ggord
- rStrava



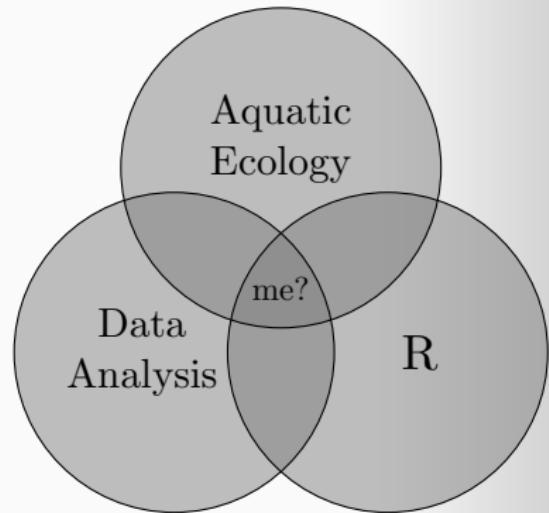
Elements of the adventure

- Indicator development
- Time series methods
- Reproducible research
- Visualization and graphics
- Model comparisons



Elements of the adventure

- Indicator development
- Time series methods
- Reproducible research
- Visualization and graphics
- Model comparisons





Elements of the adventure

LIMNOLOGY and OCEANOGRAPHY: METHODS



Limnol. Oceanogr.: Methods 00, 2015, 00-00
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doi: 10.1002/lom3.10062

Improving estimates of ecosystem metabolism by reducing effects of tidal advection on dissolved oxygen time series

Marcus W. Beck,^{*1} James D. Hagy III,² Michael C. Murrell²

¹ORISE Research Participation Program, USEPA National Health and Environmental Effects Research Laboratory, Gulf Ecology Division, Gulf Breeze, Florida

²USEPA National Health and Environmental Effects Research Laboratory, Gulf Ecology Division, Gulf Breeze, Florida

Ecology

Can we get ‘better’
metabolic
estimates?

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Ecology

Can we get ‘better’ metabolic estimates?

R

WtRegDO software package as supplement

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Ecology

Can we get ‘better’ metabolic estimates?

R

WtRegDO software package as supplement

Data analysis

Novel application of WRTDS method and online viz products