Scientist Spotlight

Dr. Shivakumar Shivarudrappa

What is your educational background?
I have a Bachelors in Fisheries Science from the University of agricultural science, Bangalore, India, a Masters in Fisheries Environment and Ecology from Veterinary, Animal and Fisheries University, Karnataka, India and a Ph.D. in Marine Science with an emphasis on Biological Oceanography University of Southern Mississippi, Stennis Space Center, MS.

What inspired you to become a scientist?
When I was growing up my grandparents' house was one of my favorite places to go. My grandparents, being farmers, would talk about inconsistent rain from one year to another and about the monsoon bringing enough rain for a successful crop. I would listen in fascination. Once I was in high school I learned about El Niño and La Niña cycles and how it affects global weather and my grandparent's conversation about rain made complete sense, which blew my mind and made me want to learn more about planetary cycles and natural phenomenon. My love for water and natural inclination to learn biology with ease and suitable opportunities brought me to the present.

Can you describe what you enjoy the most about conducting scientific research?
I am an early career scientist who is eager to experience the scope of being an independent scientist but thus far, it has to be analyzing the data. Best thing about being scientists is that based on your understanding and acquired knowledge of nature and world, you can design and test your own theories and ask your own question to contribute or improve existing knowledge. To test these theories, we go out in the field with a set plan and experimental design to collect data and toil over analyzing samples to generate data. But, it is during the data analysis stage that everything comes together either to validate or refute your theory.

What is your role as a scientist for CWC?
I work for Dr. Rabalais as a post-doctoral research associate. My responsibilities in CWC include taxonomic identification of benthic invertebrate fauna to assess the impact of the 2010 Deepwater Horizon oil spill on their community. This requires continuous updating of benthic invertebrate taxonomic identification skills and developing statistical methods for identifying potential effects.

Can you summarize your oil spill research and describe any surprising findings you have come across?
We are still analyzing our samples but the good news is I am seeing an increasing trend in infaunal abundance and species diversity from successive years, which is a sign of a gradually recovering community. I am also finding a lot of suspension feeding polychaetes, which indicates that the infaunal community is in the middle stages of succession according to succession continuum model, but we need to investigate all our samples to confirm these findings.

The Coastal Waters Consortium's mission is to assess the chemical evolution, biological degradation, and environmental stresses of petroleum and dispersant within Gulf of Mexico coastal and shelf ecosystems.

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