

### ENCOUNTERS WITH THE 'GLADIATORS OF THE SEA'

| By Joey Ngunu

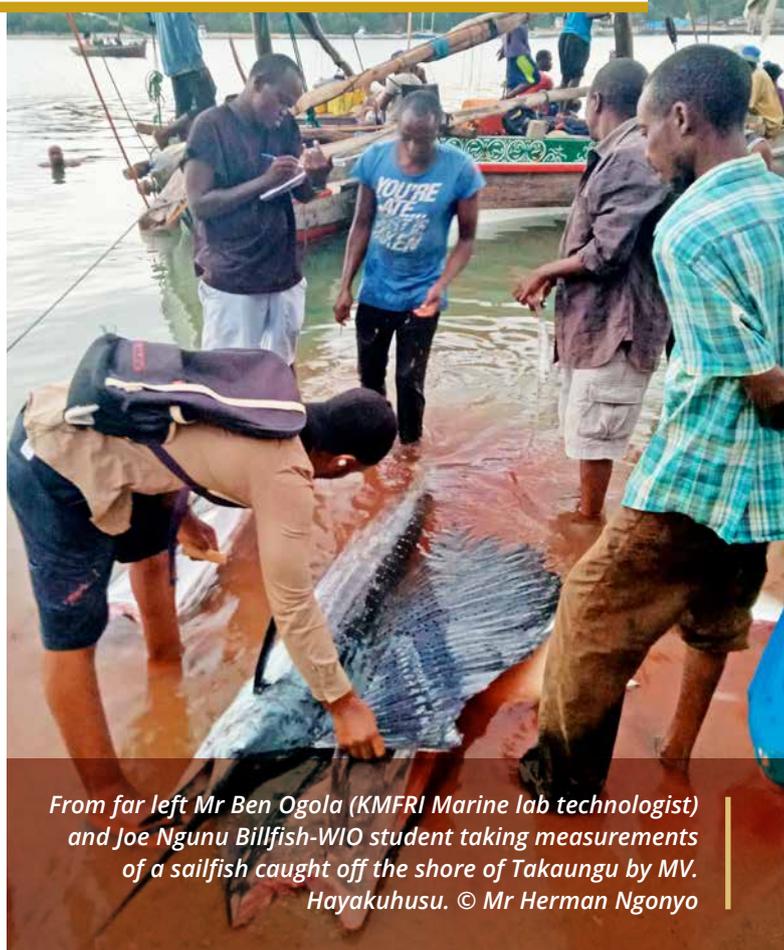
**MARINE SCIENCE UNDERGRADUATE, JOEY NGUNU**, spent a year as a student research assistant on the **BILLFISH-Western Indian Ocean (WIO) project** – a regional project funded by WIOMSA, which focuses on understanding the dynamics of billfish and associated fisheries in the Western Indian Ocean (WIO) region.



“The opportunity to study billfish has allowed me to appreciate the need for evidence-based science in order to address the gaps in information regarding these species on a regional and global perspective,” says Ngunu.

**Ngunu says that as an emerging scientist, the benefits of being part of the BILLFISH-WIO team are twofold.**

“First, the data collected, especially on sailfish, has been profound in answering my research topic on ‘The implications of sport fisheries on sailfish species in Kenyan waters’. I am looking forward to sharing these findings. Second, hands-on research is a great start for my career and an opportunity to contribute to the body of knowledge about our oceans,” he adds



*From far left Mr Ben Ogola (KMFRI Marine lab technologist) and Joe Ngunu Billfish-WIO student taking measurements of a sailfish caught off the shore of Takaungu by MV. Hayakuhusu. © Mr Herman Ngonyo*

Ngunu explains that from a young age, he was fascinated with the ocean and spent countless hours watching the TV show ‘Flipper’, learning about nature from the revered broadcaster and natural historian, Sir David Attenborough. This ignited his thirst for knowledge about the ocean and the life that exists within and around it. His curiosity led him to register for an undergraduate degree in marine science at Pwani University in Kenya, where he hopes to graduate as a marine technologist.

**“What I remember most during these visits is the first time I got to see a sailfish. It was a thrilling experience and one that validates the importance of providing opportunities for early career scientists to experience hands-on research.”**

## Implications of sport fisheries on stocks of highly sought-after game fish species

**Ngunu's research topic for his final year examines marine sport fishing, particularly for billfish.**

He says there is [increasing potential for sport fishing in the WIO](#) given the prominence of the region as a billfish-fishing destination, particularly in Kenya, Mozambique, Seychelles, South Africa and Mauritius. **Ngunu saw the opportunity to investigate the implications of sport fisheries on the stocks of highly sought-after game fish species and was placed as a student research assistant on the BILLFISH-WIO project** – a regional project funded by WIOMSA, which focuses on understanding the dynamics of billfish and associated fisheries in the WIO.

“Over the past year on the project, I have had the chance to experience first-hand research which is dedicated to improving our knowledge about these ‘Gladiators of the Sea’ – the billfish species,” says Ngunu. “Billfish are apex predators found at the top of oceanic food chains. They are characterized

by a prolonged upper jaw, which can be extended flat and sword-like (e.g., swordfish) or rounded and spear-like (e.g., sailfish, spearfish and marlin),” Ngunu explains.

**“Field observations at fish landing sites have been learning experiences for me, where I noted that billfish species, especially marlin, have distinct characteristics for males and females, with the females attaining larger sizes than males,” he says.**

“In Kenya, a variety of billfish occur, including black marlin, blue marlin, striped marlin, sailfish, short-billed spearfish and broadbill swordfish. During my recent field assignments in Kilifi and Watamu, I have had the chance to record data on sailfish, swordfish and black marlin catches while interacting with fishers,” he adds.

### Sailfish sighting validates importance for early career scientists to experience hands-on research



“But what I remember most during these visits is the first time I got to see a sailfish. It was a thrilling experience and one that validates the importance of providing opportunities for early career scientists to experience hands-on research,” he adds.

**The sailfish, described as the “fastest fish in the ocean” achieving speeds of up to 110 kilometres per hour (68 miles per hour), is grey in colour with a white underbelly. Its distinct dorsal fin (that gives it the name “sailfish”) stretches nearly the entire length of its body.**

Ngunu explains that the particular sailfish he saw weighed 20.3 kg (approximately 44.7 pounds) and

had been caught by a local artisanal fisher who sold it to fish traders for between USD 3-3.5 per kilogram (fetching him about USD 61). Like many other marine fish species in Kenya and the WIO, billfish are an important source of income for coastal communities.

**However, research on the socio-economic significance of the “Gladiators of the Sea” remains limited in the region.**

As such, the work being undertaken by the BILLFISH-WIO project through its collaborators and students, is critical in making a case for countries to consider developing strategies that amplify the sustainable use of billfish species.