CURRENTS

COMPILED BY SAM BURKHART

OCEAN NETWORKS CANADA LAUNCHES NEW PROJECT

Ocean Networks Canada has launched a new project for citizen scientists. It's designed to evaluate how the research performed by them compares to the same analysis conducted by marine biologists and by specially designed algorithms. Thus, for those of you who don't like to fish, you have a chance to use your eyes to fish digitally without disturbing a single creature.

The new study follows up on a previous effort to make these comparisons. The earlier analysis focused on recorded video from Barkley Canyon, a cabled camera platform at a depth of 900 metres. The results showed that the more than 500 digital fishers' efforts were almost as good at identifying and counting a single species—sablefish—as the biologists, and that both exceeded the competence of algorithms.

I asked Dave Riddell, ONC's post-secondary education coordinator, how algorithms can be useful in deep ocean research. "ONC collects massive data sets from the continual streaming supplied by our cabled ocean observatories," he said. "We track a multiplicity of ocean conditions at depths down to 2.7 kilometres. There is so much information coming in that even large groups of scientists can't study it all. That's why we need help first from citizen scientists and then from the computers."

The latest project expands the study to identify four distinct species: sablefish, hagfish, poachers and eelpouts. Citizen scientists are given specific instructions on how to identify each species. Only a whole fish, with a head and at least one eye visible to the camera should be identified and counted—don't bother if only the tail is observable. Further instructions are available at data.oceannetworks.ca/DigitalFishers.

Riddell explained why this information is useful. "The type of data collected in this campaign has the potential to determine how many different species and how many individuals are present in a given region. Video data collection for this type of analysis is a new field. This study will contribute to understanding how the analysis by citizen scientists and algorithms can help population studies gathered from stationary camera data."

—Marianne Scott