Camila Cancino

Norma J Lang Prize for Undergraduate Information Research

The final project for the Biology & Conservation of Fishes course requires the creation of a Wikipedia article on a poorly documented fish. The selection process was simple, use *FishBase*, a database run by the Swedish Museum of Natural History, and filter for poorly documented fishes. The final decision came between the Cuban Dogshark described as having large eyes, a pointed snout, and venomous spines or the Mexican Barracuda recognized for its gnarly underbite. The Cuban Dogshark (*Squalus cubensis*) won. This species was a prime example of poor documentation. The entire Wikipedia page consisted of one assigned image, an inaccurate species distribution map, and two sentences describing the *entire* species.

The creation of the Wikipedia article, or Wikifish, as coined by my professor, required species description, distribution, life history, and conservation status. The goal was to expose students to a variety of research methods, article styles, and organization skills. In addition, ten of the sources had to be peer-reviewed scientific articles. However, articles on the Cuban Dog-shark were either difficult to find or only mentioned in a list of all dog-sharks in the *Squalus* genus. Any information I found using Google Scholar or UC Davis Library search engine was extrapolated or simply information that was broadly applied to the entire genus. The sources I gathered were a result of my initial searching methodology. This method was tedious and unhelpful, and the results were too broad and delivered untraceable claims about behavior leading to dead ends. I was not able to find concrete information on species specific description, distribution, life history, or conservation status.

The original approach was scrapped; out were the initial processes to research and organize well-established facts to be coalesced into a detailed Wikipedia page. Since the information on this species was widely undocumented, all applicable sources were vetted through a new method of fact checking. Each fact was filtered through my new criteria: either the fact was substantiated by separate peer-reviewed accounts or extrapolated from outdated research previously discounted by recent research. This became the new information vetting process and was successful for a while. Then, the useful sources ran dry.

Professor Durand recommended seeking professional help from, Ruth Gustafson, a UC Davis STEM librarian. She introduced me to Boolean operators, wildcard operators, and Web of Science. These tools for successful searches were unknown to me. Google scholar and UC Davis library searches were the extent of my research knowledge. Ruth walked me

through the process and offered tips to ensuring Web of Science's selection criteria worked in my favor. Afterwards, the pool of potential resources tripled to include physical copies, research papers, and review articles. These articles also offered additional secondary sources through reverse searching, a process that follows an author's citation to the original paper and scans for the original claim or its tertiary source. This method allowed me to trace back the original source of claims over my species and its genus. Most importantly, I could do an originality check on unsubstantiated claims. Before, these claims were faulty and self-referencing. Now, this newly acquired skill opened new resources and cast a wide net of sources.

This wide net of sources caught international research articles as well. The issue with studying a species found in South American waters is that updated research is not within the North American research scope. This created two accessibility problems: one these papers were in Spanish, and two, were inaccessible to a UC Davis student. Luckily, the international papers I found through Google Scholar and Web of Science were accessible as view only, which allowed me to reference these crucial articles. Despite the looming risk of mistranslation, the international articles were imperative to the Wikipedia page for the purpose of making contributions to an under documented species. After evaluating the benefits and risks, I decided to focus on the public contribution this project would provide. Therefore, each international source I translated was vetted with an English source.

Initially, my biggest concern was finding sufficient sources. Now, my biggest concern was misinformation and credibility. As a scholar, many professors have spoken about rising misinformation and research funding cuts. Any sources published under my project would be approached with caution. To ensure the information gathered, with the help of UC Davis resources, is accurate and credible during the time of publishing. Now, the Cuban dogfish's Wikipage consists of thirteen images and thirteen sections.

No AI tools/technologies were used in the writing of this essay