
Shark biomechanics A

A Data Management Plan created using DMPTool

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Data and Materials Produced

Data to be collected:

Video footage of a shark swimming. That video and clip it in video editing software like iMovie into smaller usable segments that contain a behavior I want (straight swimming, turning, other maneuvers). Each of those smaller segments are only about 10 seconds long. Each small clip of video is then loaded into the point tracking software. I use LoggerPro which is cheap and readily available, but there are other custom scripts out there. In LoggerPro, I track points on the sharks body in each frame of video. There are usually 120 frames per second and about 10 seconds of video. The LoggerPro software records those points in an x,y coordinate system. Then I can export those data into excel. In excel, use those data to calculate velocity, acceleration, curvature of the body, basically any variable I want to look at.

What data will be generated: velocity of the movement, the acceleration, the curvature; the measurements of the mechanics' of the shark swimming.

What data types: experimental measures, and processed to test hypotheses

How will you capture and create the data? From video, to point tracking software, exported to excel

I don't believe there is existing data used in the research at this point.

Standards, Formats and Metadata

File formats: CSV, it contains the data without being huge (hours of video)

What form will the metadata take? I haven't totally decided. It needs to define the coordinates, so the variables are clear (I guess like any metadata)

DataCite's metadata schema version 3.1 (<https://schema.datacite.org/>), is a possibility

Which metadata standard will you use and why have you chosen them?

Roles and Responsibilities

How will the responsibilities regarding the management of your data will be delegated?

No clue

Dissemination Methods

- What transformations will be necessary to prepare data for preservation / data sharing?
- What metadata/ documentation will be submitted alongside the data or created on deposit/ transformation in order to make the data reusable?

Policies for Data Sharing and Public Access

Are there ethical and privacy issues? Don't think so

- Who will hold the intellectual property rights to the data and how might this affect data access?

Archiving, Storage and Preservation

- What is the long-term strategy for maintaining, curating and archiving the data?

Putting it someplace it can stay....

- What metadata/documentation will be submitted alongside the data or created on deposit/transformation in order to make the data reusable?