NPRB 2301: Tasks, Roles and Manuscript Plans

# Project Management

TASK: Biannual reports (Jan/July) - Cindy

TASK: Budget management/invoicing - Each person with a budget manages their own

TASK: Manage Research Workspace/Information Flow

TASK: Data management - Cindy

TASK: Data library in RW - Cindy

TASK: Final report - Cindy/All

# Preparation

* Sample Inventory
  + TASK: Maintain up to date inventory of samples, includes foraging FMA for lost data forms (Cindy)
  + TASK: Selection of samples (All)
  + TASK: Manage shipping of samples (Cindy)
  + TASK: Maintain tracking of all samples that are in process (Cindy with input from All)
* Sample Prep
  + TASK: Separation of layers (Dan)
  + TASK: Transfer to LLNL (Dan and Bruce)
* Sample pre-processing
  + TASK: Drying (Bruce/tech)
  + TASK: Spinning a small number of samples (Bruce/tech)

# Objective 1

* Evaluate 14C values in PSS and SD eye lens cores (earliest material) and outer layers (recent material) as an indicator of age.
  + TASK: Soluble:insoluble ratio evaluation (Bruce/Dan)
  + TASK: AMS (Bruce)
  + TASK: Chronology explorations (Allen/Bruce)
* Assess the eye lens 14C chronology by comparison with validated ages of SD.
  + TASK: Age spiny dogfish and calculate birth year (Cindy/Beth) - Cindy needs to review data of eye collections, prioritize spine ageing
  + TASK: compare spine birth year to 14C birth year
* Estimate plausible ranges of age-at-length, age-at-maturity, and lifespan of PSS.
  + TASK: run growth models with sensitivities (Allen/Beth?)

Potential Manuscripts

# Objective 2

* Investigate sources of potential variation in isotopic values (13C, 14C, and 15N) of shark eye lens protein.
  + TASK:
* These include
  + sample quality (e.g., freezing/thawing altering the structure of the eye lens),
    - TASK: notes on transport issues, how samples delaminate, qualitative discussion of potential impacts
  + protein turnover in eye lenses,
    - TASK: AMS of set of samples with separated sol/insol proteins
    - TASK: Calculate ratios as needed for adjusting other samples
  + dietary and maternal contributions
    - TASK: Run bulk isotopes (Taylor)
    - TASK: Analysis TBD (Taylor)
  + Habitat, depth, and region.
    - TASK: Same as above
  + Ontogenetic diet changes
    - TASK: Run CSIAA samples (Taylor)

Potential Manuscripts:

# Objective 3

* Estimate age-related life history parameters (and associated uncertainty) used in stock assessments and test more robust stock assessment approaches.
  + TASK: Natural mortality analysis (in conjunction with other AK elasmos) - Cindy
  + TASK: Run through DLMs with simulated values where needed (i.e., ORCS) - Cindy

Potential Manuscripts

* Reevaluation of elasmobranch natural mortality estimates and their use in stock assessment in Alaska (Tribuzio, Matta, others?)
* Refining the refined ORCS specific to AK stock assessment of severely data-limited PSS (Tribuzio, Cope, Free, Matta, others?)
* PSS demographic modeling (part of G. Dunne’s PhD, but informed by our results)
* DLM simulations/evaluation (may overlap with G. Dunne’s work and potentially combined with above manuscript, details TBD)