



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Alaska Fisheries Science Center
7600 Sand Point Way N.E.
Seattle, Washington 98115-6349

23 May 2022

Simon Kinneen, Chair
North Pacific Fishery Management Council
1007 W. 3rd Avenue
Anchorage, AK 99501

Dear Mr. Kinneen,

I am pleased to recommend the appointment of Caitlin Allen Akselrud as a member of the Bering Sea / Aleutian Islands (BSAI) Groundfish Plan Team (GPT).

Caitlin Allen Akselrud is a Research Fish Biologist in Groundfish Assessment Program (GAP) in the Resource Assessment and Conservation Engineering Division at the Alaska Fisheries Science Center (AFSC). She is also working on her Ph.D in the School of Aquatic and Fishery Sciences at the University of Washington under the supervision of Dr. Andre Punt where her dissertation research focuses on a multi-species management strategy evaluation applied to California coastal pelagic species. Allen Akselrud is one of the most qualified GAP members to serve on the GPT due to her combined experience in stock assessment, fishery management, and experience with survey data collection and data products estimation. Over the last 2 years in GAP she became familiar with Alaska groundfish surveys design, survey data products, and their use in stock assessment and management advice. Allen Akselrud is currently a co-author of the EBS walleye pollock stock assessment for which she wrote updated code for all survey design-based data products for walleye pollock. She also provided model-based estimators for abundance and age-composition obtained from a spatio-temporal models using VAST.

Before joining GAP her graduate work included novel assessment methods applied to Bering Sea Pacific cod and Bering Sea Tanner crab stocks, where she worked directly with members of the AFSC Status of Stocks and Multispecies Assessment Program. She also worked with the Northwest Fisheries Science Center to prepare and present stock assessments on Lingcod and sablefish to the Pacific Council. Allen Akselrud is well connected with the AFSC to stock assessment authors and the survey teams where she leads a weekly Survey-Centric R Users Group that concentrates on education and collaboration of AFSC personnel. The aim of this group is to increase collaboration and discussion among the group members and to work toward more reproducible and transparent science products through available software and technology.

Allen Akselrud's combination of stock assessment, management strategy evaluation, and specific expertise with BSAI pollock, along with her hands-on experience with assessment survey data products for BSAI stocks, makes her well qualified to participate in the GPT.

Sincerely,

Dr. Robert Foy
Director for Science and Research





EDUCATION

- In Progress Ph.D. in Management Strategy Evaluation for Fishery Management
School of Aquatic and Fishery Sciences, University of Washington, Seattle, WA
- April 2017 M.S. in Fishery Management and Population Dynamics
School of Aquatic and Fishery Sciences, University of Washington, Seattle, WA
- June 2010 B.S. in Ecology, Behavior, and Evolution
Minor in Marine Science
University of California San Diego, La Jolla, CA

RESEARCH AND WORK EXPERIENCE

- 2020–present Research Fish Biologist, Groundfish Assessment Program, Alaska Fisheries
Science Center, NOAA, Seattle
- 2017–present Ph.D. dissertation research: Multi-species management strategy evaluation,
applied to California coastal pelagic species, University of Washington
- 2014–2017 Master’s thesis research: Stock assessment with an age-size-structured model,
University of Washington
- 2016–2017 Lingcod population assessment 2017, Collaboration with NOAA, Northwest
Fisheries Science Center
- 2014–2015 Sablefish population assessment 2015, Collaboration with NOAA, Northwest
Fisheries Science Center
- 2012–2014 Hazardous Materials Technician, University of California, San Diego
University hazardous materials emergency response and business planning
- 2011–2012 Consulting Scientist, California Wetfish Producers Association
Inshore California market squid data analyst, survey sampling grid designer,
survey Chief Scientist, and sample processing, documentation, and preservation.
- 2008–2011 Research Associate, Scripps Institution of Oceanography
California Current conditions and market squid population dynamics analyst, at-
sea scientist, and ichthyoplankton identification, documentation, and preservation.

PUBLICATIONS

- Hilborn, R, **Allen Akselrud, C**, Peterson, H, Whitehouse, GA. 2021 The trade-off between
biodiversity and sustainable fish harvest with area-based management. *ICES Journal of
Marine Science*, 78(6): 2271–2279. <https://doi.org/10.1093/icesjms/fsaa139>.
- Anderson, CM, Krigbaum, MJ, Arostegui, MC, Feddern, ML, Koehn, JZ, Kuriyama, PT,
Morrisett, C, **Allen Akselrud, CI**, Davis, MJ, Fiamengo, C and Fuller, A. 2019. How
commercial fishing effort is managed. *Fish and Fisheries*, 20(2): 268-285.
- Allen Akselrud, C**, Punt, AE, Cronin-Fine, L. 2017. Exploring model structure uncertainty
using a general stock assessment framework: The case of Pacific cod in the Eastern

Bering Sea. *Fisheries Research*, 193: 104-120.

Punt, AE, **Allen Akselrud, C**, Cronin-Fine, L. 2017. The effects of applying mis-specified age- and size-structured models. *Fisheries Research*, 188:58-73.

Koslow, JA, **Allen, C**. 2011. The influence of the ocean environment on the abundance of market squid, *Doryteuthis (Loligo) opalescens*, paralarvae in the Southern California Bight. *California Cooperative Oceanic Fisheries Investigations Reports*, 52:205-213.

REPORTS

Ianelli, J, Fissel, B, Stienessen, S, Honkalehto, T, Siddon, E and **Allen Akselrud, C**. 2021. Assessment of the Walleye Pollock Stock in the Eastern Bering Sea. North Pacific Groundfish Stock Assessments and Fishery Evaluation Reports.

Haltuch, MA, Wallace, J, **Allen Akselrud, C**, Nowlis, J, Barnett, LAK, Valero, JL, Tsou, TS, and Lam, L. 2017. 2017 Lingcod Stock Assessment. Pacific Fishery Management Council.

Johnson, KF, Rudd, MB, Pons, M, **Allen, C**, Lee, Q, Hurtado-Ferro, F, Haltuch, MA, and Hamel, OS. 2015. Status of the U.S. sablefish resource in 2015. Pacific Fishery Management Council.

NOAA DATA PRODUCTS

Bering Sea pollock (*Gadus chalcogrammus*) for stock assessment and research: 1) indices of abundance (design-based, model-based, and with density-dependent corrected), 2) age composition data (design-based, model-based, and density-dependent corrected), age-length keys, and weight-at-age data, 3) length composition data (design-based, and density-dependent corrected).

Northern rocksole for stock assessment: model-based indices of abundance

Survey data products: length-weight regression, maximum length by species, and survey data post-processing.

PROGRAMMING

Proficient in R and ADMB (based in C++). Experience with packages for Stock Synthesis and TMB. Familiar with RMarkdown, TeX, and Shiny. SQL code for Oracle database management. Mapping experience in ArcGIS. Basic Linux for high-performance computing and cloud computing. Basic programming in FORTRAN, MATLAB, and HTML.

SERVICE: NOAA

2020–present AFSC Harassment Prevention Working Group (HPWG)

2020–present AFSC Team for Inclusion, Diversity, and Equity (TIDE); *currently on leave*

2020–present AFSC Fieldwork COVID SOP Group

OUTREACH AND TEACHING: NOAA

Summer 2022 NOAA Office of Education, Hollings Scholar summer internship program

Summer 2022 NOAA Office of Education, Educational Partnership Program with Minority-Serving Institutions

Winter 2021 Introduction to R Coding for GAP
2020 - 2021 University of Washington Capstone student mentorship