2018-2019

Hutton Junior Fisheries Biology Program Report

"...to increase diversity... and to stimulate interest in careers in fisheries science and management among groups underrepresented in the fisheries professions today..."

By Mary Webb Banning, Educational Program Coordinator

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What is the Hutton Program?

The **Hutton Junior Fisheries Biology Program** (Hutton Program) is an educational program sponsored by the **American Fisheries Society** (AFS) for high school students. The principal goal of the Hutton Program is to *increase diversity within the fisheries profession and to stimulate interest in careers in fisheries science and management among groups underrepresented, specifically minorities and women, in the fisheries professions today*.

The Hutton Program is a paid summer internship and mentoring program for rising eleventh grade through graduating seniors interested in pursuing science disciplines associated with natural resource and environment management. Under the Hutton Program, selected students benefit from an eight week hands-on fisheries science summer experience in a marine and/or freshwater setting.

Of the $5,000/students' program cost, a $4,000 stipend goes to each student, with the balance supporting AFS' administrative and overhead costs. The program has offered scholarships to 689 Hutton scholars (57% minority students and 58% female students) mentored by an estimated 720 mentors associated with over 150 institutions. Students are matched with qualified mentors (university scientists, researchers working at private, tribal, federal, or state laboratories and field stations) who provide guidance, instruction, and evaluation on work activities.

The Hutton Program provides its students with hands-on activities that increase awareness of conservation issues, the importance of healthy aquatic systems, and career opportunities in fisheries. As the students work with their mentors, they gain an awareness of conservation issues and the importance of healthy aquatic systems. On a daily basis, students are participating in projects relevant to fisheries science, habitat protection and restoration. By the end of the summer, the students have an understanding of what is involved in being a fisheries biologist and the career opportunities available in the field of fisheries science. In this way, this program addresses a crucial issue that affects the future of the fisheries profession by mentoring those pursuing a career in fisheries science and filling the anticipated gap from the retirement of almost half of its fisheries biologists in the next few years.

Student Information

Application Requirements

Students eligible for the summer internship:

- Current 10th, 11th and 12th grade students
- Have an interest in the biological sciences
- Physically fit for fieldwork
- Reliable mode of transportation to and from internship site

Note: Previous Hutton Scholars are not eligible for reapplication.

Length of Assignment

The Hutton Junior Fisheries Biology Program is an 8-week summer internship. Selected students will work with their mentor to select a start date once they finish school for the summer. Students are expected to work 40 hour weeks. Work weeks can be broken into five 8 -hour work days or four 10-hour work days.

Program Requirements

Students are expected to accomplish **ALL** requirements to successfully complete the program.

1. The student, parent or guardian, and mentor are required to meet soon after notification to discuss duties, responsibilities, and the summer schedule.
2. In order to participate, students must return to an acceptance form signed by the student, parent or guardian, and mentor the AFS Educational Program Coordinator.
3. Students must provide their own transportation to and from the work site. Travel and other expenses associated with fieldwork are borne by the mentor's organization.
4. Complete and submit bi-weekly timesheets, signed by student and mentor.
5. Students are required to provide written reports: a mid-summer report and a final report at the close of the program
6. Complete End of program evaluation and assessment

If at any time during the summer program the student does not abide by the agreement made between student, parents, and mentor, AFS reserves the right to drop the student from the program and withhold the remaining scholarship funds.

Projects & Field Work

Assignments are made with participating organizations within reasonable commuting distance from the students. During the summer, students work alongside their mentors, collecting samples and assisting with analyzing data. Each student will participate in field work and lab work.

How to Apply

Applications for the program can be found at hutton.fisheries.org.

Students must complete all required fields in all sections of the application for their application to be considered complete. Applicants who submit incomplete applications will not be considered for selection.

- Online application form
- Official copy of student transcript
- Statement of Interest
- Responses to Two Open-Ended Questions
- Academic Letter of Recommendation from a science, math or English teacher
- Character Letter of Recommendation from a supervisor, community or organizational leader, or a different teacher

Selection

All applications are competitively selected. Selection criteria include: academic ability, recommendations, and overall interest in fisheries science and marine biology.

The principal goal of the program is to increase diversity within the fisheries field; qualified women and minority applicants are strongly encouraged to apply.

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Hutton Junior Fisheries Biology Program

2001-2019 Student Data and Trends

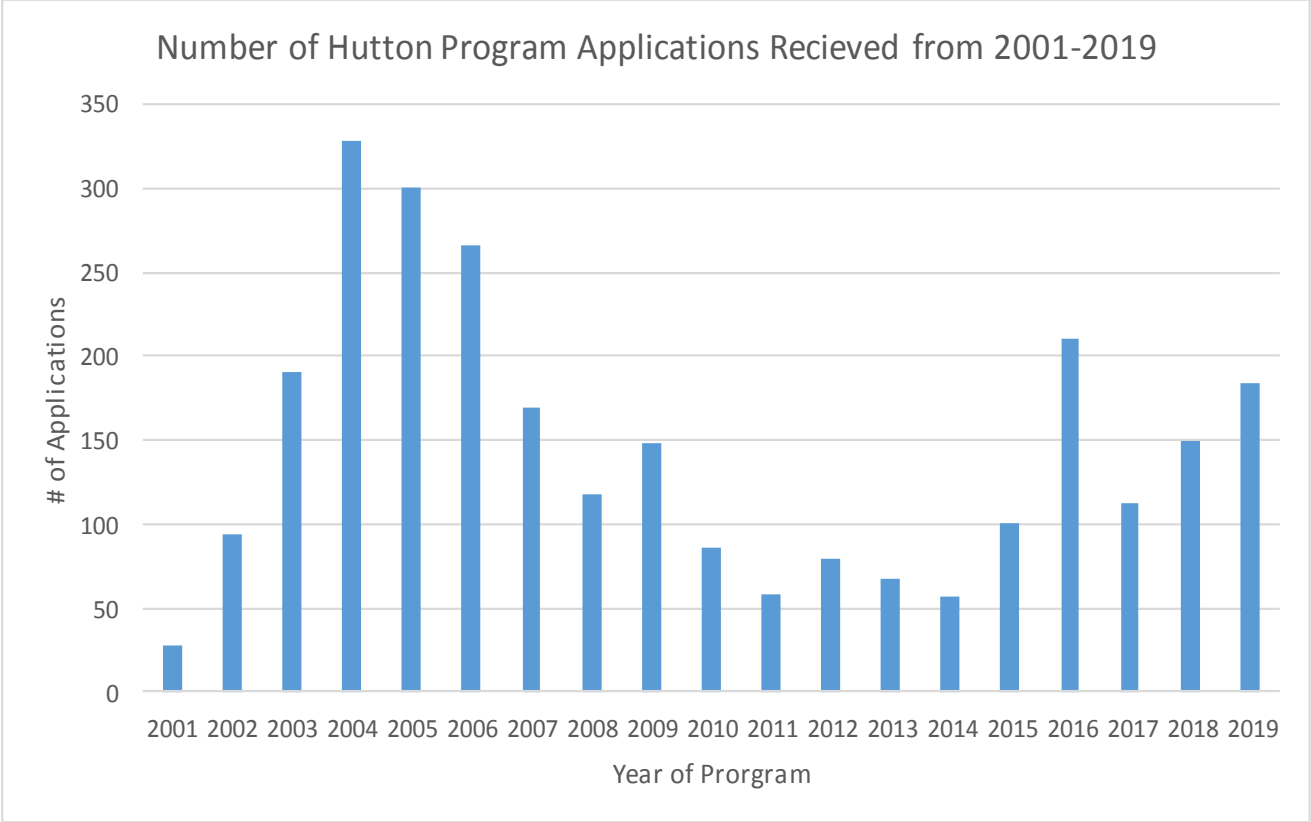


Chart 1: This shows the overall number of applications received each year for the Hutton Junior Fisheries Biology Program

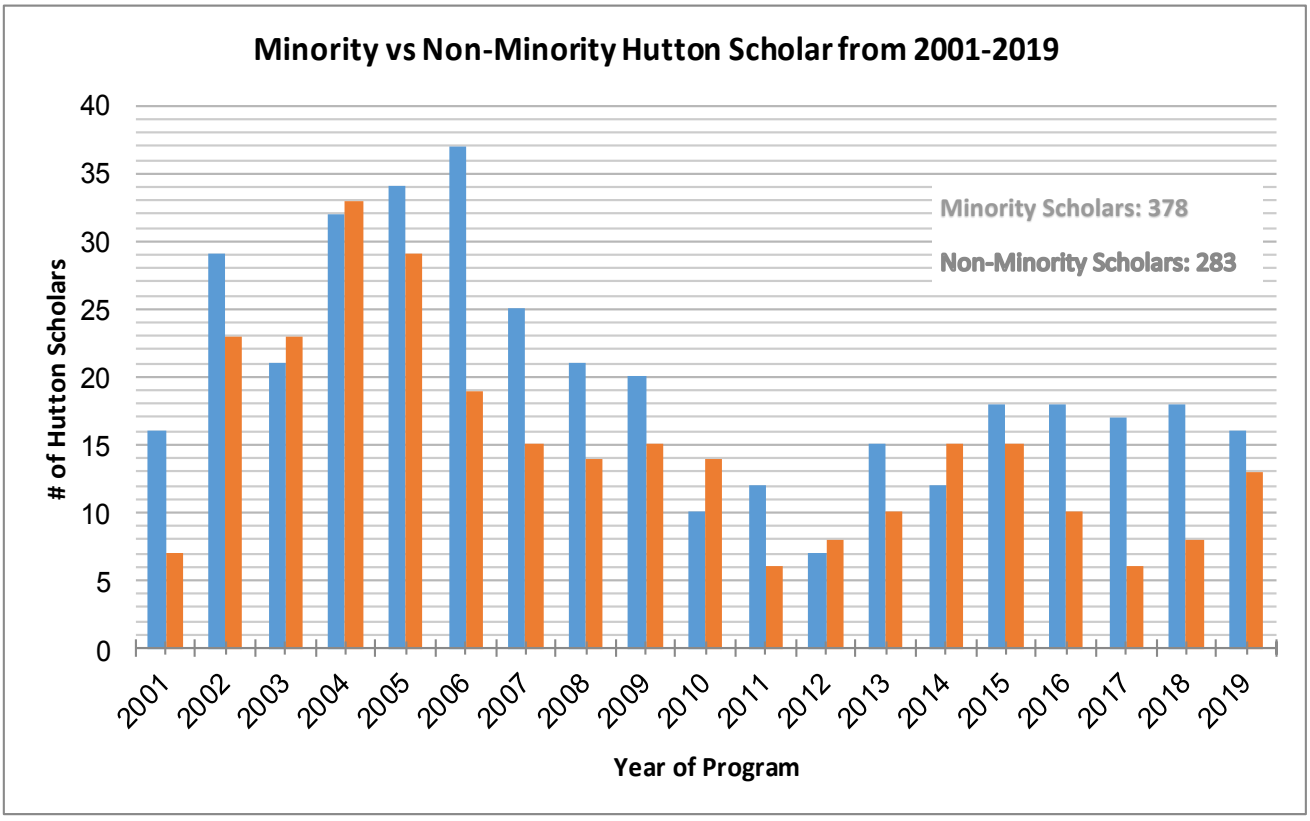


Chart 2: This shows the overall trend of minority vs non-minority Hutton Scholars over the last 19 years of the program

2018-2019 Hutton Supporters

USDI Bureau of Land Management

USDA Forest Service

National Oceanic and Atmospheric Association

Wisconsin Department of Natural Resources

Missouri Department of Conservation

AFS Fish Culture Section

AFS Education Section

AFS Idaho Chapter

AFS Minnesota Chapter

AFS Michigan Chapter

AFS Colorado/Wyoming Chapter

Thank You!

2019 Activities and Looking Forward to Hutton's 20th Summer

In 2018, AFS headquarters introduced two new initiatives: Hutton Pen Pals Networking Program and a webinar about what it means to be a Hutton Scholar and college choice. The activities were designed to build networking skills, prepare students for college and future career paths and introduce the students to members of the American Fisheries Society. This year we continued to offer both programs for our 2019 Hutton Scholars.

The Hutton Pen Pal Networking Program

This program was designed to have current graduate or doctorate students and early career professionals reach out to Hutton Scholars and talk about interests, careers and give advice to an aspiring fisheries professional AFS headquarters paired with the Student Subsection of the Education Section and the Equal Opportunities Section to find volunteers and assign them to individual 2019 Hutton Scholars.

Each student had 1-2 "pen pals" and the AFS student member was responsible for reaching out, via email, to their assigned Hutton Scholar once or twice over the course of their internship. This program was a great success! It received praise from both students and mentors about how great of an opportunity this was for networking and connecting current fisheries students and early professionals to the future generation of the fisheries profession.

AFS Webinar Series for Hutton Scholars

AFS headquarters offered a webinar for 2018 Hutton Scholars based on what it means to be a Hutton Scholar and thinking ahead to college and potential career paths. This summer, the AFS office hosted a webinar "Staying Involved with AFS after the Hutton Program: Student Subunits" where we heard from Lisa Izzo, President of the Student and Early Career Professionals Subunit and Katherine Dale, Santa Cruz-Monterey Bay Area Student Subunit. Each presenter spoke about what student subunits are, how to become involved and the ways student subunits are involved in around campus and their communities. Looking forward to next summer, AFS staff hopes to hold another webinar about diversity and inclusion within the fisheries profession.

Looking ahead to 20 years of the Hutton Program

As we look forward to the 20th summer of the Hutton Program, AFS staff is thinking about ways to strengthen the program through offering our students more opportunities during and after their internship. We hope to begin fundraising both inside and outside of AFS's membership to implement these new programs in the coming years.

The new program ideas are as follows:

- ⇒ Create an impact study of the Hutton Program over the past 20 years
  - See how many past Hutton Scholars are considering, currently studying or working in the fisheries science profession
  - Hutton Scholars attending colleges or universities with fisheries programs
  - Minority Hutton Scholars who decided to go into the field of fisheries after completing the Hutton Program
  - Hutton Scholars whose summer in the Hutton Program swayed their decision to pursue a fisheries related profession
  - Create an alumni network through this impact study
- ⇒ Partner with Universities to host a cohort of Hutton Scholars on campus for the summer
  - Recruit and place 2-4 Hutton Scholars on a college campus to participate in their Hutton internship
    - Students would be recruited regionally
    - This could be beneficial to the universities as a recruitment method
  - Students would reside on campus for the duration of the program; condensed program
    - Students to be introduced to working and studying fisheries on campus
    - Students would work with current students at the college or university
  - Working with Virginia Tech to launch a pilot of this program in 2020
- ⇒ Host a national gathering for our current year Hutton Scholars
  - Bring together the Hutton Scholars so that they could connect with each other through their shared experiences
  - Modeled as a "mini conference"
    - Students would be exposed to college and career workshops, networking events and give a poster presentation
  - We are looking into hosting this national gathering on a college or university campus

Notes from the field…

Benjamin Veith
Location: Idaho Department of Fish and Game in Lewiston, ID
Mentor: Brett Bowersox

Electrofishing was the most common way that I saw used to capture fish so they could be measured, weighed, tagged, etc. Electrodes are dipped into the river and shocked the fish with the right amount so they are only stunned and float to the surface where they can be collected. We were looking for juvenile steelhead trout in Big Bear Creek. Many sites are closer to roads to provide easy access. But on this trip, the site would be some miles away from any road or path. Going to more remote areas allows IDFG to collect more accurate data. The area truly was pristine. We trekked through the river. After the water temperature [warmed up] enough that we were not allowed to electro-fish anymore, we would fly fish for steelhead in stretch of river enclosed by nets we set up.

Cristina Chirvasa
Location: Bureau of Land Management in West Valley City, UT
Mentor: Cassie Mellon

I was able to spend a week out on the White River with the Division of Natural Resources crew getting populations for the “3 species” (Roundtail Chub, Flannelmouth Sucker, and Bluehead Sucker - as well as Pikeminnow). As one of the DNR crew manned the shocker boat, I stood at the front and netted the fish that came up. If it was one of the 3 species I’d place them into a bucket of water to be dealt with later. Any non-natives were either placed in a dry bucket to be disposed of or thrown back into the river (bass would always be disposed, but catfish only on designated miles for example). I netted the only two pikeminnow encountered on the trip and the protocol was to stop immediately so as to not risk harming them (there are only about 2000 left). After about 30 or more minutes had passed, we’d break and PIT tag, measure, and weigh the fish. I was able to do all of these things as well as learn how to enter data into their logger.

Kyu Wintersteen
Location: Oregon Department of Fish and Game ; Lookingglass Fish Hatchery in La Grande, OR
Mentor: Joseph Feldhaus

I got to experience so many different things and gotten to feel the true field experience of jumping into 39 degree water for a snorkel survey which was really amazing, but saw a few steelheads, but a massive amount of redside shiners. I also found Pit Tags to be really fascinating and it is proven to be a useful system in monitoring fish activity especially for areas like where I am from which all the streams here are connected to the Columbia River and It is really important to know and understand the movement and timing of when these fish make it out to the ocean and what the return numbers are going to be which is critical from managing a fisheries and hatcheries ability to collect brood stock.

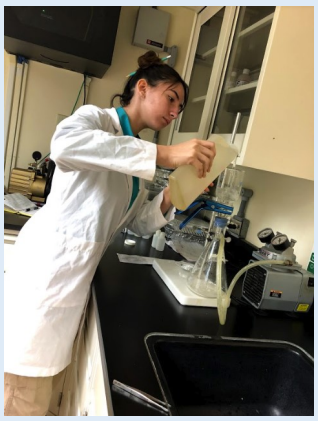
Meet a few of the 2019 Hutton Scholars!

Josie James-Le

Location: National Oceanic and Atmospheric Administration (NOAA) Headquarters in Silver Spring, MD

Mentor: Jeff Vieser

"I already knew I wanted to study marine or environmental science, but the Hutton Program has given me a great way to demonstrate my interest to colleges and given me direction for what I want to study. "



Camila Diaz Grajales

Location: US Forest Service in Luquillo, Puerto Rico

Mentors: Tamara Heartsill-Scalley and Mariam Salgado-Herera

"The Sabana Field Research station has exposed me to a more sophisticated side of biology that isn't commonly introduced to teenagers such as myself early on. "

Zachariah Sahli

Location: Bureau of Land Management in Coos Bay, OR

Mentor: Jeff Jackson

"The Hutton Program has been a valuable experience for me because I get to observe and mimic how professionals conduct themselves, I get valuable experience in biology, and I get money that I can invest in my future education. Throughout the program I get to observe how my mentors deal with various situations, showing me how to properly deal with similar situations if I ever find myself in their shoes. "

Jenna Lopez

Location: San Antonio River Authority in San Antonio, TX

Mentor: Shaun Donovan

"I wasn't aware that fisheries science was a thing until I heard of the Hutton program and started this internship, and now I know more about fish than I ever imagined I would. I think this program is a great opportunity for anyone who cares about wildlife or our water and land. "

James Lebron

Location: University of Puerto Rico -Aguadilla in Aguadilla, PR

Mentor: Robert Mayer

"[In my future studies]… I will be studying general biology, with this Hutton internship experience influencing me to eventually move into the field of ecologically-beneficial or restorative aquaculture practice."

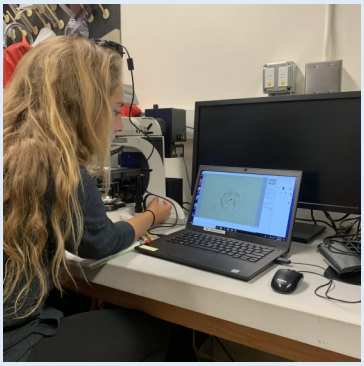
Isha Sangani

Location: NOAA Alaska Fisheries Science Center and US Geologic Survey Fisheries Science Center in Seattle, WA

Mentors: Lyall Britt and Dave Beauchamp

"…the Hutton program has increased my interest in fisheries. I realized that I enjoy being in the field and collecting data, and I also enjoy using computer technology to pick out trends in

Meet a few of the 2019 Hutton Scholars!



Emilie Otterson

Location: NOAA Southwest Fisheries Science Center in La Jolla, CA

Mentor: Noah Ben-Aderet

"It is something that not many other high schoolers can say that they've done. It also isn't all just work; you make a lot of meaningful connections, gain invaluable experience and have lots of fun doing so. "

Erin Petersen

Location: US Forest Service in Livingston, MT

Mentor: Clint Sestrich

"This summer provided me with many new adults in my life that give me challenging questions, specific answers, and thought intriguing tasks on the significance of why we are doing the things that we do.

Kenneth Kimmons

Location: US Forest Service in Zig Zag, OR

Mentors: Greg Wanner

"Before I was planning on majoring in nursing, but now I will be majoring in Biology. I feel like participating in this internship has given me a leg up in the professional world and also the classroom."

Jacob "Koby" Goldstein

Location: University of Alaska/ NOAA Sea Grant in Juneau, AK

Mentor: Ginny Eckert

"I have learned so much already and will be able to use these techniques if I go into a profession of this nature. Knowing how to work with a field crew and be apart of a big project will help me in jobs and in school in the future."

Gianna Richardson

Location: US Forest Service in Oxford, MS

Mentor: Zanethia Barnett

"This internship has placed me as close as I can to the frontlines of aquatics research that I can reach without a PhD., so I will be forever grateful for it."

Isabella Stenstrom

Location: US Forest Service in Asheville, NC

Mentor: Sheryl Bryan

"I think it is a great option to expand your knowledge about the opportunities that could come from this field...It can show you what an actual job in fisheries looks like. Nothing can bet real-world experience with a job or a science."

2020 Hutton Program Timeline of Activities

Expectations of Program Activities

Expectation	Program Activities
Second week of October	Launch Hutton Mentor application online
December 15th	Launch Hutton Scholar applications online
February 15th	Deadline to submit Student and Mentor Applications Begin verifying latest applications and creating application review packets of latest applications
Mid-February to first week of March	Download student data to database, sort data, create review packets in Google Docs or upload them to Google Drive
First week of March	Hutton Committee Selection Process begins Send applications to HC for review/selection, start organizing conference call
1st week of April	Date for Hutton Review Committee conference call to make final selections
Early to mid-April	Notify accepted students and begin to pair them with suitable mentors
First two weeks of May	Send informative resources to accepted students and mentors
May 31st	Deadline for students to meet with mentors
June 1st	Deadline to receive all forms Deadline to send all resources and information to student & mentor

Hutton Program Timeline of Internship

Dates	Mentors	Students	AFS
June 1st	Mentor Acceptance Form due to AFS	Student Acceptance Form due to AFS	
Prior to internship starting	Meet with student	Meet with mentor	
After first two weeks	First timesheet due to AFS		First paycheck is mailed to students (*must have timesheet before checks are mailed)*
Mid-way through program (4 weeks)	Second timesheet due to AFS	Mid-summer internship report due to AFS	Second paycheck is mailed to students
After six weeks of program	Third timesheet due to AFS		Third paycheck is mailed to students
After program is complete (8 weeks)	Final timesheet due to AFS		Fourth paycheck is mailed to students
Within two weeks of program completion	Final report and program evaluation due to AFS	Final internship report and program evaluation due to AFS	Collect photos and videos of students and mentors over the summer

Congratulations on another great year, Hutton Scholars!