Application Related Information

Application:	Application Incomplete	Iteration Name:	202410_GR_G
Grad Program Applying To:	MES	Program Name:	MES

Recommendation Information

Recommended By:	Heidi Pearson	Recommenders Title:	Associate Professor of Marine Biology
Recommenders Institution:	University of Alaska Southeast	Contact Name:	Rayne Billings
Waive Access to Recommendation Ltrs:	I choose to waive my right to review this recommendation.	Recommendation Waiver Choice:	
Recommendation Form Submitted:	✓	Recommendation Status:	Received
Received Date:	01/27/2023 12:03 PM	Recommender Assessment:	I recommend this applicant without reservation.
Recommendation Type:	General	Recommender Form:	Letter of Recommendation
Recommendation Entity ID:	1024000108979652	Recommendation Owner:	Josephine Bernier

Recommender Form Questions

How long have you known applicant:		Applicant ability as self-directed learner:	
Time since last contact with applicant:		Applicant as productive member of group:	
Relationship with Applicant:		Applicant most significant strengths:	
Ability to complete rigourous grad program:		Responsibility/reliability:	
Communication Skills - Oral:		Communication skills - written:	
Service Orientation-sensitivity/empathy:		Ability to work independently:	
Ability to handle stress:		Ability to think critically:	
Ability to analyze/problem solve:		Ability to think creatively:	
Openness to feedback:		Potential for leadership:	
Ability to work in a team:		Personal/professional reflection:	

Description Information

Description:		Form URL:	https://evergreenstatecollege.radiu

Other Information

Created Time:	01/22/2023 03:10 PM	Created By:	Josephine Bernier
Modified Time:	01/27/2023 12:03 PM	Modified By:	Josephine Bernier

UNIVERSITY of ALASKA SOUTHEAST

Department of Natural Sciences
School of Arts and Sciences
11066 Auke Lake Way
Juneau, AK 99801

January 27, 2023

Dear Members of the Selection Committee,

I write this letter in *enthusiastic support* of Rayne Billing's application to the Master of Environmental Studies program at The Evergreen State College. I have known Rayne since she first contacted me about volunteering in my marine mammal research lab at the University of Alaska Southeast (UAS) in January 2022. I was immediately impressed by her strong academic record, excellent writing skills, and the variety of research and field experiences she had completed so far. Below, I will summarize my work with Rayne over the past year and highlight her many strengths.

During Spring 2022, I offered Rayne a volunteer intern position to help organize and manage my long-term humpback whale and killer whale photo-identification catalogue. Given her wealth of experience with whale research and photography, she was a natural. She quickly learned the skills needed and was reliable and punctual. She took direction easily, asked questions when needed, and was able to work independently. I note that she often found ways to improve the data management processes, which was quite welcome.

Based on this work, I then encouraged her to apply for a NIH-funded BLaST (Biomedical Learning and Student Training) Undergraduate Research Experience scholarship during Summer 2022 so she could help me with vessel-based field work and data management in the lab. She was selected to receive this competitive scholarship, which provided a stipend for the summer. Rayne assisted on my NOAA-funded study to assess changes in humpback whale stress hormone levels and residency levels in the Juneau area due to changes in vessel traffic as a result of the pandemic. Rayne's primary role was to record data on the field laptop using Mysticetus software and to help with photo-identification of humpback whales in the field. Rayne quickly became very proficient at running the software, which is no small task given the speed at which data are called at to be recorded when we are with humpback whale groups. Rayne also quickly learned to identify individual whales based on their distinctive fluke and dorsal patterns, which is critically important as our protocol was to identify each whale before we obtained a blubber biopsy sample from them. On average, we had one field day per week. During the rest of the week, Rayne worked in the lab on database QA/QC and management. In short, Rayne was a critical member of the team and this summer's field season would not have been possible without her help.

Rayne is a quick worker, but is not hasty as her work is consistently high level. Oftentimes, she finished the immediate tasks at hand and had time to work on other projects. This time was used for her to delve into other projects in my lab, such as working with my killer whale data, something which was important to my lab but which had not been a priority. Rayne has an outstanding knowledge of killer whales in the Northeast Pacific. I gave Rayne free reign to work with my killer whale photo-identification images and data, and she has exceeded my expectations. She processed and identified all of my killer whale images from 2013 to 2022,

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created a catalogue organized according to matriline, and created a poster showing each individual and its familial relations. This work has been truly exceptional.

Once again, based on her high level of work during Summer 2022, I offered Rayne a grant-funded position to continue working in my lab on these projects during Fall 2022. Further, for Spring 2023, she was awarded a URECA (Undergraduate Research and Creative Activity) grant from UAS in addition to another BLaST URE. This Spring, we plan to deploy a hydrophone in Juneau to detect killer whale vocalizations and presence. Rayne will also GIS to map killer whale and humpback whale locations. Again, Rayne is a quick learner and has become proficient at GIS. I also note that she is also learning the Matlab-based social analysis program, SOCPROG, to analyze humpback whale and killer whale association patterns. Based on our discussions over the past year, I also know that Rayne has a keen interest in marine conservation, management, and policy so I believe this program will be a great fit for her.

Based on the above, I hope it is clear that Rayne is an outstanding researcher and scientist. She is also an exceptional writer. Rayne works as a tutor at the UAS Writing Center and has published works in the UAS literary journal, *Summit*. Rayne's level of writing surpasses most undergraduates with whom I have worked. In fact, I would deem her level of writing to be better than some graduate students with whom I have worked! This is a critical component of being a successful graduate student, and taken in combination with her scientific aptitude, I believe she is the complete package for a graduate student.

Finally, I will note that Rayne has had a nontraditional academic journey. She is a first-generation college student. After starting at community college, she made her way to UAS and has thrived here, overcoming the numerous challenges incurred during the pandemic as so many of our students have. At UAS, she has taken advantage of numerous opportunities to pursue her interests and make the absolute best of her educational experience.

In sum, of all the students I have taught and mentored in my 20+ years of teaching and research, I rank Rayne in the top 5%, based on her research aptitude, intellect, work ethic, and enthusiasm for learning. Please give Rayne's application your utmost consideration. You won't be disappointed! Please don't hesitate to contact me should you have any questions.

Sincerely,

Heidi C Pearson, Ph.D

Heidi C. Pearson, Ph.D.

Heidi C. Pearson, Ph.D.
Associate Professor of Marine Biology

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