Project code: 2022-1-IT02-KA171-HED-000073309

Name and Surname: Zhu Zhengxue
Home Institution: UNIVERSITY OF CAMERINO – SCHOOL OF ADVANCED STUDIES
Host Institution: MONTANA TECHNOLOGICAL UNIVERSITY (Department of Biological Sciences, USA)
Type of mobility: Student outgoing mobility
Duration: 3 months

Description of the activities:

During my exchange program, I visited Yellowstone National Park three times to conduct research on understory plant diversity along the post-fire succession gradient. The primary goal was to model Composition diversity to evaluate its sensitivity to factors such as successional stages, forest structure, and soil properties. To understand how Composition diversity tended to increase more significantly in the later successional stages compared to species richness. This research provided valuable insights into the mechanisms driving these patterns. Additionally, I investigated plant distribution around geothermal features, aiming to understand how temperature, pH, and moisture influence plant diversity and distribution in these habitats.Through these field trips, spanning more than 20 days in total, I gained a deeper and more comprehensive understanding of the beauty and ecological importance of Yellowstone National Park, the world's first national park, and witnessed firsthand the effectiveness of its conservation efforts.

Under the guidance of Professor Robert at Montana Tech, I also participated in field visits to several local ecological restoration sites, including mountain plant restoration, mine site revegetation, and wetland restoration projects. These visits provided practical knowledge on restoration techniques and plant recovery strategies in disturbed habitats. During my time at the university, I delivered two seminars, introducing the concepts of biodiversity at different spatial scales and presenting corresponding statistical frameworks for analyzing biodiversity patterns.

Collection of data on plant diversity in Yellowstone National Park.

The backpacking trip was conducted to collect samples at hot springs.

Seminar to introduce biodiversity and statistical analysis