PROJECT TITLE: IMPROVING POLLINATOR HABITAT IN THE GREAT PLAINS

Clint Otto

Discipline: Ecology; Wildlife Biology;

PROJECT DESCRIPTION

BACKGROUND

Concern over declining pollinators has led to multiple conservation initiatives for improving forage for bees in agroecosystems. In 2014, our USGS team partnered with the USDA to conduct research on the foraging ecology of native bees and managed honey bees in the Northern Great Plains. The US Department of Agriculture is using USGS science to improve the cost-effectiveness of their conservation programs for pollinators.

Objectives:

Quantify what forbs are used and preferred by native bees and honey bees in the Northern Great Plains.

Investigate forb establishment rates on newly seeded pollinator plantings.  INTERN TASKS

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• Conduct floral resource surveys on prairies and pollinator conservation plantings in rural areas.

• Collect samples from managed honey bee colonies

• Census milkweed along-side unmanned aerial vehicles.

• Sample, pin, and identify native bees.

• Enter data in Microsoft Access and Excel.

• Make data publicly available on the USGS Pollinator Library Website.

• Prepare outreach document for USDA partners, summarizing 2019 findings.

• Perform GIS analyses.

BENEFITS TO INTERN

In addition to technical training, I believe it is important for students to understand how research is used by policy makers and natural resource managers. To that end, the student under my supervision will gain a detailed understanding of how USGS science is used by our USDA partners to improve conservation delivery for pollinators in the Northern Great Plains. She or he will improve their ability to identify forb and other perennial plants using dichotomous keys. They will also gain experience handling, pinning, and identifying native bees and honey bees.
The student will also gain valuable field experience, making them more competitive when applying to graduate school, or future employment. Most of the past technicians and interns on my team have gone on to post-graduate degrees. I would like the selected intern to assist in the preparation of an outreach product that will highlight their key research findings from the 2020 field season. My team has extensive experience publishing outreach material including digital videos and partner fact sheets.

MENTORING PLAN

The candidate will work routinely with myself and two other professional scientists. We will hold weekly meetings to discuss project duties and ensure the intern is achieving their goal. As with past interns, we will talk about the process and challenges of applying and exceeding at graduate school and pursuing a rewarding career.

ADDITIONAL DETAILS

STUDENT SKILLS AND INTERESTS

Past experience working with bees or plants. A course in bee and/or plant taxonomy is preferred but not required. GIS training is also beneficial.

LOCATION: Jamestown, ND

ACTIVITY LEVEL:

Level 8-2: The work requires some physical exertion such as long periods of standing, walking over rough, uneven, or rocky surfaces; recurring bending, crouching, stooping, stretching, reaching, or similar activities; or recurring lifting of moderately heavy items. The work may require specific, but common, physical characteristics and abilities such as above-average agility and dexterity.

FIELD WORK 50-75%  VIRTUAL? Maybe
LAB WORK 0-25%
OFFICE WORK 0-25%
OTHER none

PROJECTED START DATE 5/30/2022
EXPECTED DURATION 10 weeks