

Notice of Exemption

To: Office of Planning and Research
P.O. Box 3044, 1400 Tenth Street, Rm. 113
Sacramento, CA 95812-3044

From: California Department of Fish and Wildlife
Habitat Conservation Planning Branch
Native Plant Program
P.O. Box 944209
Sacramento, CA 94244-2090

Project Title: Joshua Tree Genome Project (Project)

Project Location: Plant material collection for the Joshua Tree Genome Project (Project) will occur at populations of *Yucca brevifolia sensu lato* (both eastern and western Joshua tree) in Upper Highest Burns Canyon (34.2554° North, 116.7200° West), Upper Yucca Valley (34.2314° North, 116.6606° West), Lower Lynn Road (34.2984° North, 116.3992° West), Lower Yucca Valley (34.2365° North, 116.4576° West), Copper City (35.0608° North, 116.9862° West), and Shadow Valley (35.4447° North, 115.6980° West) in San Bernardino County. Collection locales in Los Angeles County are Lower Saddleback Butte (34.6937° North, 117.8184° West), Lower Redmond Road (34.7044 North, 117.9705° West) and Upper Lancaster (34.7451 North, 118.4953° West). Kern County collection sites are Lower Walker Pass (35.6375° North, 117.9739° West), Upper Walker Pass (35.6610° North, 118.0194° West), Pacific Crest (35.6630° North, 118.0268° West), and Rand Mountains (35.2828° North, 117.7145° West). DNA extraction and sequencing will be conducted at California State University Northridge in Northridge, CA, and Willamette University in Salem, OR. Flower dissection will be conducted at Willamette University.

Project Description: The California Department of Fish and Wildlife is issuing a permit to Jeremy Yoder [Permit No. 2081(a)-22-004-RP] pursuant to Fish and Game Code section 2081(a) for a project to collect Joshua tree tissue and flower samples to provide genomic data for an annotated reference genome. Genetic resources will provide an understanding of Joshua tree's coevolution with their specialized pollinators and adaptation mechanisms to extreme desert climates. A small amount of fresh, green leaf tissue (approximately 100 grams) and ten fresh flowers will be collected from 100 individual plants at each of the thirteen plant material collection locations. Plant tissue DNA will be extracted using a Qiagen DNEasy plant kit and samples will be processed using sequence-capture methodology targeting loci with known or suspected roles in climate adaptation and floral development. DNA will be prepared into libraries for multiplex sequencing and aligned to the draft Joshua tree reference genome. Data will be made publicly available on the National Center for Biotechnology Information (NCBI) Sequence Read Archive following scientific publication. Floral samples will be exported to Willamette University for dissection and measurement analysis.

California Public Agency Approving Project: California Department of Fish and Wildlife

Person or Agency Carrying Out Project: Jeremy Yoder, Assistant Professor, Department of Biology, California State University Northridge

Exempt Status:

- Ministerial;
- Declared Emergency;
- Emergency Project;
- Categorical Exemption. Type and section number: Section 15306, Class 6

Reasons why project is exempt: The project consists of basic data collection and research that will facilitate the genetic understanding of *Yucca brevifolia*. The permit issued by the California Department of Fish and Wildlife for the Project includes measures to ensure that existing populations of *Yucca brevifolia* are not detrimentally impacted by research activities.

Lead Agency Contact Person: Joanne Heraty

Area Code/Telephone/ Extension: (916) 594-4574

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Signature:

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Isabel Baer, Native Plant Program Manager

Date: 5/20/2022

Signed by Lead Agency

Date Received for filing at OPR: _____