

KINGMAN FIELD OFFICE SCOPING FORM

Proposal: Research project, Crissal thrasher endocrine stress response investigation

DOI-BLM-AZ-C010-2010-0029-CX WL01 – (Kingman Resource Management Plan, 1995, Page 79, Objectives and Planned Actions section)

S:/BLMshare:NEPA/eaais/wildlife/Crissal thrasher Document Location

EA Number

RMP Implementation No.

Document Location

Land Description: Mohave County, BLM administered Public Land.

Applicant: Bobby Fokidis, PhD. Candidate, Principal Investigator, School of Life Sciences, Arizona State University

Authorization:

INVOLVEMENT: Indicate in the left column which disciplines need to provide information into the EA.

Needed Input (X)	Discipline	Signature
	Lands	
	Minerals	
X	Range	/s/ David Brock
	Wild Horse and Burro	
	General Recreation	
X	Cultural and Paleontological Resources	/s/ Tim Watkins 04/28/2010
X	Wilderness	/s/ Leonard A. Marceau 04/26/2010
	Soils	
	Surface and Groundwater Quality/Water Rights	
	Air Quality	
X	Wildlife	/s/ Rebecca L. Peck 04/29/2010
X	Threatened and Endangered Plants and Animals	/s/ Rebecca L. Peck 04/29/2010
X	Migratory Birds	
	Surface Protection	
	Hazardous Materials	
X	Areas of Critical Environmental Concern	/s/ Rebecca L. Peck 04/29/2010
	Visual Resources	
	Socio-Economics/Environmental Justice	
	General Botany/Noxious Weeds	
	Energy Policy	

Writer: /s/ Rebecca L. Peck

Date: 04/19/2010

Environmental Coordinator: /s/ David Brock

Date: 04/19/2010

Field Manager: /s/ Jackie Neckels

Date: 04/19/2010

Categorical Exclusion Documentation Format for Actions Other Than Hazardous Fuels and Fire Rehabilitation Actions

Crissal Thrasher Research

EA NO: DOI-BLM-AZ-C010-2010-0029-CX

A. Background

BLM Office: Kingman Field Office Lease/Serial/Case File No.: N.A.

Proposed Action Title/Type: Research Project: Crissal thrasher endocrine stress response investigations in the Kingman Field Office Area.

Location of Proposed Action: Mohave County, Kingman Field Office, BLM administered public land. Riparian areas and desert washes along the Big Sandy River, Santa Maria River particularly in the Arrastra Mountain wilderness administered by the Bureau of Land Management. These areas have large expanses of suitable habitat and these species are reported as common (USGS data).

APPLICANT: – Bobby Fokidis, Ph.D. candidate, Principal Investigator, School of Life Sciences, Arizona State University.

Description of Proposed Action:

Methods: The sampling involves capture, blood sampling, and on-site release of 8-10 birds of Crissal thrashers in the Kingman Field Office area. Birds will be lured into a mist nest using playback calls and are typically captured within a few minutes of calling. The project is expected to be completed in 1-7 days. Once a bird is captured, the net would be taken down and moved to a new thrasher territory up to ¼ to ½ mile away. Access to non-wilderness areas and to the wilderness boundaries will be by 4WD vehicle. All vehicle travel would be on existing roads. The proponent will backpack into the wilderness to capture birds. Capture would not occur within occupied or suitable southwestern willow flycatcher habitat.

The sampling uses a standardized and very common procedure which has been successfully used by Arizona State University with approximately 470 individual curve-billed thrashers captured without harm or fatality. Many previously sampled birds have been observed in the wild, months and even years post-release in the same areas.

Sampling of birds that occupy habitats in wilderness will allow the researcher to sample birds that are not habituated to humans and it will allow the sampling of birds that have not increased their stress response in reaction to human presence.

Time Frame: 2010, 2011, April - July. The project is expected to be completed in 1-7 days. Once a bird is captured, the net would be taken down and moved to a new thrasher territory up to ¼ to ½ mile away.

Purpose: The purpose of the study aims to compare the endocrine stress responses of 4 closely-related bird species (California, Crissal, Curve-billed, and Le Conte's Thrashers) from habitats (coastal chaparral, riparian shrub land, upland cactus desert and lowland shrub desert, respectively) which differ in mean temperature and aridity during the breeding season.

Hypothesis: *Specifically we predict that Thrasher species from riparian or chaparral habitats will elevate corticosterone levels faster and to a higher level compared to baseline concentrations to achieve a greater total release in corticosterone in the blood, as compared to birds from desert scrublands.*

Objective: The objective is to test the “emergency life-history stage” hypothesis postulated by Wingfield et al. (1998), which states that individuals inhabiting environments that may be “challenging” during the breeding season, suppress their endocrine stress response to enable reproduction to continue. Based on this hypothesis it is deduced that stress responses (i.e. ability to increase corticosterone in blood during capture stress) of species from “harsh” xeric habitats will be suppressed compared to those from more “benign” mesic habitats during breeding.

It is predicted that birds will respond (i.e. corticosterone levels) to the same stress of capture and handling as follows: **(more mesic)** California > Crissal > Curve-billed > Le Conte's **(more xeric)**.

Background: Where the opportunities for breeding are limited to a short window of opportunity, (e.g. as in the arctic) animals often suppress their stress response, which if activated can interfere with reproduction. This enables them to continue breeding despite facing difficult environmental conditions.

This hypothesis has been tested in many arctic-breeding birds, and has also been proposed for desert birds, however data from deserts is extremely limited. This study aims to test this hypothesis using a unique group of closely-related desert bird specialists (i.e. *Toxostoma* Thrashers) that are distributed from “difficult” xeric to more “benign” mesic habitats.

The information gathered from this study will not only test a long-standing paradigm in comparative endocrinology in a desert system, but will also provide vital insight as to how birds can physiologically adapt to increasingly arid conditions. This is especially important as mediating the stress response avoids detriments to fitness (i.e. decreased reproduction). The majority of climate change models predict decreasing precipitation and increasing air temperatures for most of the Southwest USA. As the proposed study sites will become increasingly important refugia for these species, understanding the physiology of these species is essential as baseline information. This will allow for the assessment of the degree to which increasing aridity can influence these very understudied species.

B. Land Use Plan Conformance

Land Use Plan Name: *Kingman Resource Management Plan/EIS*

Date Approved/Amended: March 1995

The proposed action is in conformance with the applicable LUP because it is specifically provided for in the following LUP decision(s):

The proposed action is in conformance with the LUP, even though it is not specifically provided for, because it is clearly consistent with the following LUP decision(s) (objectives, terms, and conditions):

WL01: Continue implementation and revision of Habitat Management Plans in coordination and cooperation with the state wildlife agency and interested publics (Kingman Resource Management Plan, 1995, Page 79, Objectives and Planned Actions section). Specific actions would include integrated monitoring and habitat improvement projects.

C: Compliance with NEPA:

The Proposed Action is categorically excluded from further documentation under the National Environmental Policy Act (NEPA) in accordance with 516 DM 2, Appendix 1, 1.6. Departmental Categorical Exclusion No. 1.6 - Nondestructive data collection, inventory (including field, aerial, and satellite surveying and mapping), study, research, and monitoring activities.

This categorical exclusion is appropriate in this situation because there are no extraordinary circumstances potentially having effects that may significantly affect the environment. The proposed action has been reviewed (See Attachment 1), and none of the extraordinary circumstances described in 516 DM2, Appendix 2 apply.

I considered the following: This project involves nondestructive sampling, all travel will be on existing roads, trails and washes, southwestern willow flycatcher habitat would not be sampled, and any cultural or paleontological resources found would be reported to the authorized officer.

D: Signature

Authorizing Official: /s/ Don McClure acting Date: 05/13/2010
(Signature)

Name: Ruben Sanchez
Title: Field Office Manager

Contact Person

For additional information concerning this CX review, contact Rebecca Peck, Wildlife Biologist, Kingman Field Office, 2755 Mission Boulevard, Kingman, Arizona 86409 928-718-3702.

Attachment 1: Extraordinary Circumstances Review

Exceptions	Comment (Yes or No with supporting Rationale)
1. Have significant effects on public health or safety.	No. The sampling is non-destructive and would not affect people at all.
2. Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands(Executive Order 11990); floodplains (Executive Order 11988) national monuments; migratory birds; and other ecologically significant or critical areas.	No, the sampling is non-destructive. The proponent has received a permit from the following agencies: AZ Game and Fish: Permit number: SP603536 (Appendix 1). USGS Federal Bird Banding Permit # 22640 (Appendix 2) IACUC Study Protocol Review completed: 10-21-2009. Diviche 09-1022R, 2 nd Amendment (Appendix 3)
3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA Section 102(2)(E)].	No, the sampling is non-destructive
4. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.	None have been identified.
5. Establishes a precedent for future action or represents a decision in principle about future actions with significant environmental effects.	No. The Arizona trapping law does not apply to live trapping of wildlife. All animals will be released unharmed (see proposal above).
6. Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.	There are no other projects of its kind occurring within this area. The sampling is non-destructive.
7. Have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by either the bureau or office.	No. The sampling is non-destructive there will be no surface disturbing activities conducted.
8. Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species.	No. Sampling would not occur in occupied or suitable Southwestern willow flycatcher habitat.
9. Violate a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment.	No. The proponent has a collecting permit from the State of Arizona and a bird banding permit from U.S. Geological Survey.
10. Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).	No. There will be no effects to low income or minority populations.

<p>11. Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007).</p>	<p>No. Access to sites on Federal lands would not be limited in any way.</p>
<p>12. Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112).</p>	<p>No, the sampling is non-destructive and does not involve surface disturbing activities.</p>

Exhibits: none

Stipulations:

1. Proponent is required to drive within existing roads, trails and washes. *Cross-country travel by motorized vehicles is prohibited.* Proponent is required to following wilderness use guidelines. Proponent can only walk into wilderness and not use any motorized vehicle or mechanized equipment in wilderness.
2. The BLM will inform livestock grazing permittees.
3. Any cultural (historic/prehistoric site or object) and/or paleontological resource (fossil remains of plants or animals) discovered would be reported to the Field Manager or his designee within one week of discovery. The netting operation would cease and the net moved to a location at least ¼ mile away. An evaluation of the discovery would be made by a qualified archaeologist or paleontologist to determine appropriate actions to prevent the loss of significant cultural or scientifically important paleontological values.
4. To avoid impacts to Southwestern willow flycatcher habitat, netting would not occur in the Tamarisk habitat around Alamo Lake.