

Appendix M

***Field Report: Cross-Base Surveys,
May 24 – 25 and June 7, 2001***

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MEMORANDUM

Date: **June 26, 2001**
To: **Pat Baughman**
From: **Julie Grialou**
Subject: **Field Report: Cross-Base Surveys, May 24 – 25 and June 7, 2001**
cc: **Jan Cassin; David Mattern**

Project Number: **554-1588-030**
Project Name: **Cross-Base**

Introduction

This memorandum summarizes the results of surveys for two butterfly species (the mardon skipper [*Polites mardon*] and the whulge checkerspot [*Euphydryas editha taylori*]), the western pocket gopher (*Thomomys mazama*), and the streaked horned lark (*Ermophila alpestris strigata*) at the McChord Air Force Base (AFB) and Fort Lewis in the vicinity of the proposed Cross-Base Highway alignment. These species are associated with prairie habitats that would, if present, be directly or indirectly affected by the road construction and operation. Surveys were conducted on three days between May and June, 2001.

Species Background

Mardon Skipper

The mardon skipper is both a Washington state and federal candidate species. This butterfly is non-migratory and occurs in two regions in Washington state, the Puget Prairie and the South Cascades (Potter et al. 1999). In the Puget Prairie, areas with Idaho fescue (*Festuca idahoensis*) and western blue violet (*Viola adunca*) may provide preferred habitat.

Mardon skippers complete one life-cycle annually, and adults typically emerge between May and July and are active for approximately 1 month. Dates of emergence vary by elevation, with emergence relatively early at low elevation sites. Any individuals at McChord AFB would be expected to emerge in May.

Whulge Checkerspot Butterfly

The whulge checkerspot butterfly is a state candidate species and a federal species of concern. In the Puget Lowlands (which includes prairie and other habitats), this non-migratory species inhabits prairies that are dominated by native vegetation (Larsen et al. 1995). Known host plants for egg deposition are the seaside plantain (*Pantago maritime macrocarpa*), which is native, and the non-native English plantain (*P. major lanceolata*). Although the whulge checkerspot is rare across its range, it can be locally abundant.

Western Pocket Gopher

As with the whulge checkerspot butterfly, the western pocket gopher is a state candidate species and a federal species of concern. In lowland western Washington, isolated populations of the species occur in open prairies and open forests (Johnson and Cassidy 1997). Dry soils loose enough for burrowing are an important habitat component.

Streaked Horned Lark

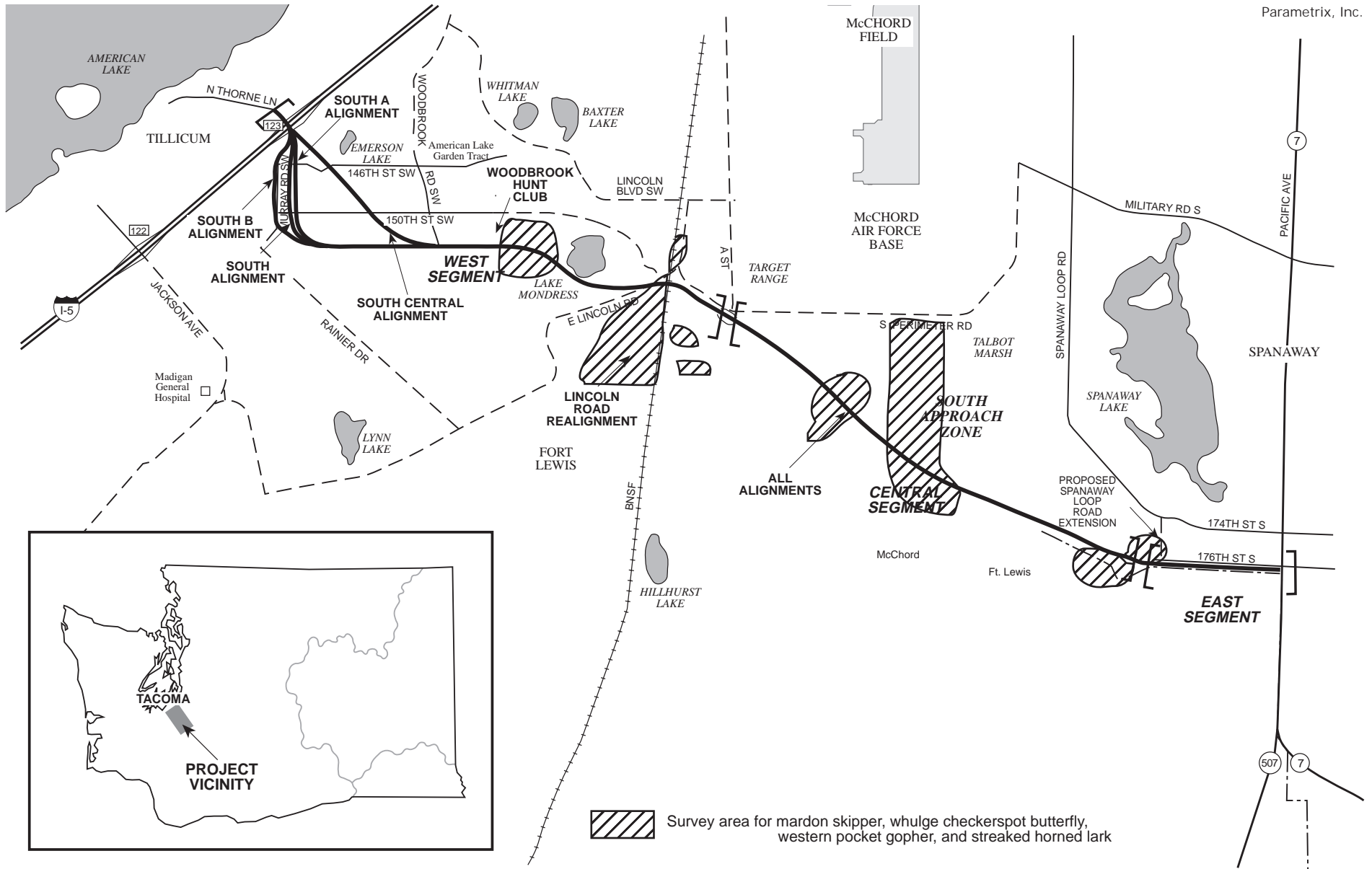
The streaked horned lark is a state candidate species and a federal species of concern. It is rare in western Washington, where it is known to breed in only four locations (Smith et al. 1997). One of these locations is the airstrip at McChord AFB. Habitat for streaked horned larks consists of short, sparsely vegetated prairies and grasslands, sand bars, and ocean dunes with grass (Beason 1995; Smith et al. 1997). In the lowlands and valleys of western Washington, grasses less than 30cm in height and areas with 20 to 50 percent bare ground are considered key habitat features for the species (Partners in Flight 2001).

Methods

The surveys were conducted by first identifying all potential habitat (i.e., open grass-dominated areas, short grass prairies, and oak/Idaho fescue savannas) for the four species of interest along the proposed highway alignment. Urban and forested areas and fields of nearly 100 percent Scot's broom (*Cytisus scoparius*) coverage were not considered habitat, and consequently these areas were not surveyed.

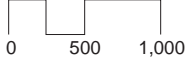
Six areas with potential habitat were located (Figure 1), as described below:

- horse pasture and open fields west of Lake Mondress
- grassy areas along the railroad tracks east of Lake Mondress (to the north and south of the proposed alignment)
- open areas in the middle, southeast and southwest corners of the south approach zone
- the area around the skeet range
- small open areas on Fort Lewis between the railroad tracks and the south approach zone
- small open areas at the far east end of the alignment.





 Survey area for mardon skipper, whulge checkerspot butterfly, western pocket gopher, and streaked horned lark

SCALE IN METERS



SCALE IN FEET



-  Roads on Military Reservation Public Use Subject to Military Permission
-  Military Property Boundary


-  Segment Boundaries

Figure 1
Locations of Butterfly,
Pocket Gopher, and
Horned Lark Surveys*

Surveys were conducted on three days (May 24th and 25th and June 7th), with most of the six areas surveyed each day. Surveys consisted of traversing the areas of interest (using the meander method, which covers approximately 60 to 80 percent of a given area) and noting any butterfly or bird species observed, as well as identifying fossorial mammal mounds. Birds were identified by both sight and song/call. Butterfly surveys were conducted in the late morning and afternoon under warm temperatures, when any butterflies present would have been active. Streaked horned lark surveys were conducted between sunrise and 9:00 A.M., when the likelihood of detecting the species was greatest. Fossorial mammal mounds were searched for during both butterfly and streaked horned lark surveys.

Results

None of the four species of interest, or their sign, were detected during the surveys. Fossorial mammal mounds were observed on several occasions, but their shape and configuration indicated that they were likely mole mounds, not pocket gopher mounds. A list of all species observed during the surveys is provided in Table 1.

Table 1. Wildlife Species Observed at McChord Air Force Base, June 7, 2001.

<u>Common Name</u>	<u>Scientific Name</u>
<u>Birds</u>	
California quail	<i>Callipepla californica</i>
Killdeer	<i>Charadrius vociferus</i>
Bald eagle	<i>Haliaeetus leucocephalus</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Sharp-shinned hawk	<i>Accipiter striatus</i>
Mourning dove	<i>Zenaida macroura</i>
Rufous hummingbird	<i>Selasphorus rufus</i>
Northern flicker	<i>Colaptes auratus</i>
Western wood-pewee	<i>Contopus sordidulus</i>
Olive-sided flycatcher	<i>Contopus cooperi</i>
Willow flycatcher	<i>Empidonax traillii</i>
Steller's jay	<i>Cyanocitta stelleri</i>
American crow	<i>Corvus brachyrhynchos</i>
Tree swallow	<i>Tachycineta bicolor</i>
Barn swallow	<i>Hirundo rustica</i>
Bushtit	<i>Psaltriparus minimus</i>
Black-capped chickadee	<i>Poecile atricapillus</i>
Red-breasted nuthatch	<i>Sitta canadensis</i>
Bewick's wren	<i>Thryomanes bewickii</i>
Golden-crowned kinglet	<i>Regulus satrapa</i>
Swainson's thrush	<i>Catharus ustulatus</i>
American robin	<i>Turdus migratorius</i>
Orange-crowned warbler	<i>Vermivora celata</i>
Yellow-rumped warbler	<i>Dendroica coronata</i>
MacGillivray's warbler	<i>Oporornis tolmiei</i>
Yellow warbler	<i>Dendroica petechia</i>
Wilson's warbler	<i>Wilsonia pusilla</i>

Table 1. Wildlife Species Observed at McChord Air Force Base, June 7, 2001 (continued).

European starling	<i>Sturnus vulgaris</i>
Cedar waxwing	<i>Bombycilla cedrorum</i>
Common yellowthroat	<i>Geothlypis trichas</i>
Western tanager	<i>Piranga bidentata</i>
White-crowned sparrow	<i>Zonotrichia leucophrys</i>
Song sparrow	<i>Melospiza melodia</i>
Spotted towhee	<i>Pipilo maculatus</i>
Chipping sparrow	<i>Spizella passerina</i>
Dark-eyed junco	<i>Junco hyemalis</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Brown-headed cowbird	<i>Molothrus ater</i>
Black-headed grosbeak	<i>Pheucticus melanocephalus</i>
House finch	<i>Carpodacus mexicanus</i>
Pine siskin	<i>Carduelis pinus</i>
American goldfinch	<i>Carduelis tristis</i>
<u>Mammals</u>	
Douglas' squirrel	<i>Tamiasciurus douglasii</i>
Townsend's chipmunk	<i>Tamias townsendii</i>
Coyote	<i>Canis latrans</i>
Mule deer	<i>Odocoileus hemionus</i>
<u>Herpetofauna</u>	
Garter snake	<i>Thamnophis</i> sp.
Bullfrog	<i>Rana catesbeiana</i>
<u>Butterflies</u>	
Tiger swallowtail	<i>Papilio glaucus</i>
Western tailed-blue	<i>Everes amyntula</i>
Mourning cloak	<i>Nymphalis antiopa</i>
Cabbage white	<i>Colias rapne</i>
Spring azure	<i>Celastrina ladon</i>

Discussion

Very little suitable habitat for the butterflies was observed along the proposed road alignment. Most of the areas that contain Idaho fescue are dominated by Scot's broom, other shrubs, and/or non-native grasses. Nectar plants that the butterflies of interest use (e.g., violet, lomatium) and nectar plants in general are not abundant in many of the areas searched (with the exception of Scot's broom, which does not appear to be a particularly good nectar plant).

Habitat for western pocket gophers along the proposed alignment is generally poor, due to the presence of Scot's broom and other non-native plants. The location that could most likely support these gophers is a small area between the Burlington Northern railway and the military railway south of Perimeter Road. This area still contains small patches of native prairie, although approximately 90% of the area is choked with Scot's broom.

Open areas along the proposed highway alignment generally contain tall (> 30cm in height) grasses and therefore do not provide good habitat for streaked horned larks. Larks are known to occur on the airfield at the McChord AFB (The Nature Conservancy and the Washington Natural Heritage Program 1996); however, this area contains short, mowed grasses that are absent along the proposed alignment.

Since this survey was a rapid reconnaissance that covered 3 days, it is possible that the mardon skipper, whulge checkerspot butterfly, western pocket gopher, and/or streaked horned lark occur in the vicinity of the alignment but were not detected. The butterflies in particular have a very patchy distribution, and even though the surveys took place during their flight times, the lack of detection does not provide definitive evidence that they do not occur there. However, given the generally poor habitat quality, it is unlikely that any of the four species of interest occurs in the vicinity of the alignment, at least not in large enough numbers to constitute viable populations.

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