

Puget Sound Prairies and the ESA

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Puget Sound Prairies and the ESA

Today's Presentation:

- Biology, threats, conservation, and management
 - Taylor's checkerspot butterfly
 - Streaked horned lark
 - Mazama pocket gopher
(4 subspecies in Thurston & Pierce Counties)
- Overview of Critical Habitat
- Special Rule
- Next Steps



Puget Sound Prairies and the ESA

Background

- Species identified in 2001 Notice of Review as Candidate under the Endangered Species Act
- Had sufficient information on biological vulnerability and threats to propose to list, - **BUT** listing precluded by other higher priority listing actions
- As Candidate species, USFWS worked with partners to survey and monitor the species and restore and protect habitat

Puget Sound Prairies and the ESA

Background

- In 2011, Received direction and funding to conduct status review of species and determine if still “warranted listing”
- Initially considered 4 candidate species together in one status review (incl. Mardon skipper)

Puget Sound Prairies and the ESA

Background

Status Review Results:

- Determined Mardon skipper was not warranted for listing
- Proposed listing and critical habitat for SHL and TCB
- Proposed listing and critical habitat for 4 subspecies of Mazama pocket gopher (3 others not warranted, 1 extinct, 1 taxonomic error)

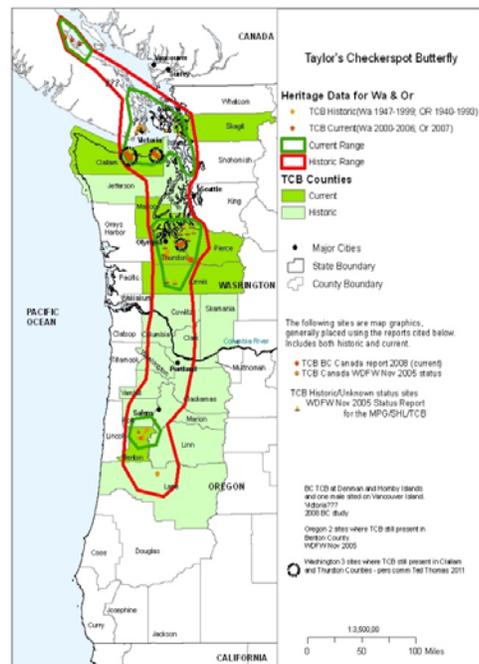
Taylor's checkerspot butterfly – biology, threats, conservation and management

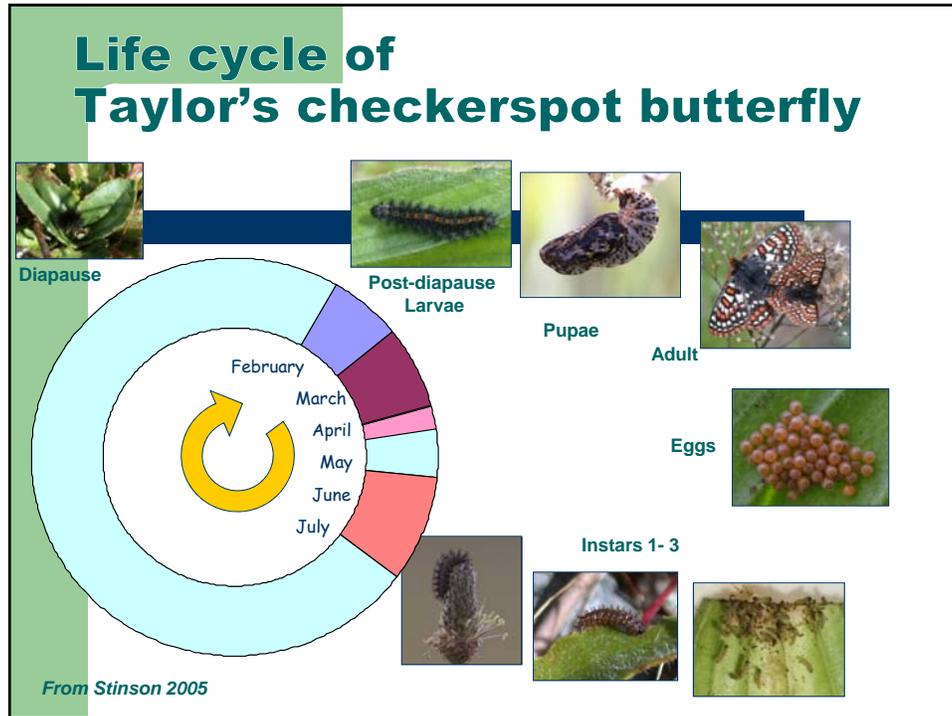


Historic vs. current occupied sites for Taylor's checkerspot butterfly

- ▣ **Historic distribution: known from > 80 sites in B.C., Washington, and Oregon**
- ▣ **Current distribution is limited to:**
 - 1 occurrence in British Columbia (Denman Island)**
 - 2 occurrences in Oregon**
 - 8 occurrences in Washington**

Rangewide distribution of Taylor's checkerspot butterfly





Food Plants – larval and adult

Larval Food Plants

- *English plantain (Plantago lanceolata)* -- egg laying
- *Harsh paintbrush (Castilleja hispida)* -- egg laying
- *Golden paintbrush (Castilleja levisecta)* -- egg laying
- *Speedwell (Veronica spp. (several) – B.C. only)*
- *Sea blush (Plectritis congesta)*

Nectar Plants utilized by adult checkerspots

- *Puget balsamroot (Balsamorhiza deltoidea)*
- *Camass (Cammassia quamash)*
- *Desert parsley, spring gold (Lomatium several spp.)*
- *Wild strawberry (Fragaria virginiana)*
- also thistle, groundsel, and common yarrow

Threats to Taylor's checkerspot butterfly

- ▣ **Habitat loss – conversion, or degradation of habitat from successional changes, military training, spread of invasive species, encroachment by conifers;**
- ▣ **Disease, predation;**
- ▣ **Inadequate regulatory mechanisms;**
- ▣ **Isolated populations, fragmented landscapes, low genetic diversity;**
- ▣ **Use of pesticides (primarily BtK insecticide).**

What actions may impact habitat and/or may harm the species?

- **Crushing of eggs, larvae, & adult butterflies**
- **Removing/destroying host plants and nectar plants at occupied sites.**
- **Pursuing adult butterflies during flight season.**
- **Collecting any life stage of the butterfly.**
- **Actions that disrupt the soil between July and March, while larvae are in diapause.**
- **Fire, prescribed or wildfire.**
- **Insecticide and less so, herbicide use**

Management Activities to Support Prairie Conservation, and TCB

- ▣ Removal of invasive species (Scot's broom, blackberry, other aggressive nonnative plants).
- ▣ Forest and tree removal .
- ▣ Prescribed fire.
- ▣ Planting of native forbs, and grasses.
- ▣ Mowing, brush removal.
- ▣ Judicious herbicide use for restoration.
- ▣ Experimentally, we have tried solarization, mowing, some tilling on highly degraded prairies.
- ▣ Grazing ?? Short term rotation of cattle with no grazing during spring and summer.

Protect, enhance, and maintain quality habitat; translocate larvae



STREAKED HORNED LARK



Streaked Horned Lark: Biology, Threats, Conservation, & Management

Biology and Species Information

- Endemic to Pacific Northwest
- Small, ground-dwelling bird
- Forages on ground in low vegetation or bare ground
- Adults feed mainly on grass and seeds, feed insects to young
- In South Sound, strong fidelity to nest locations (which are located on relatively bare ground), less fidelity elsewhere.



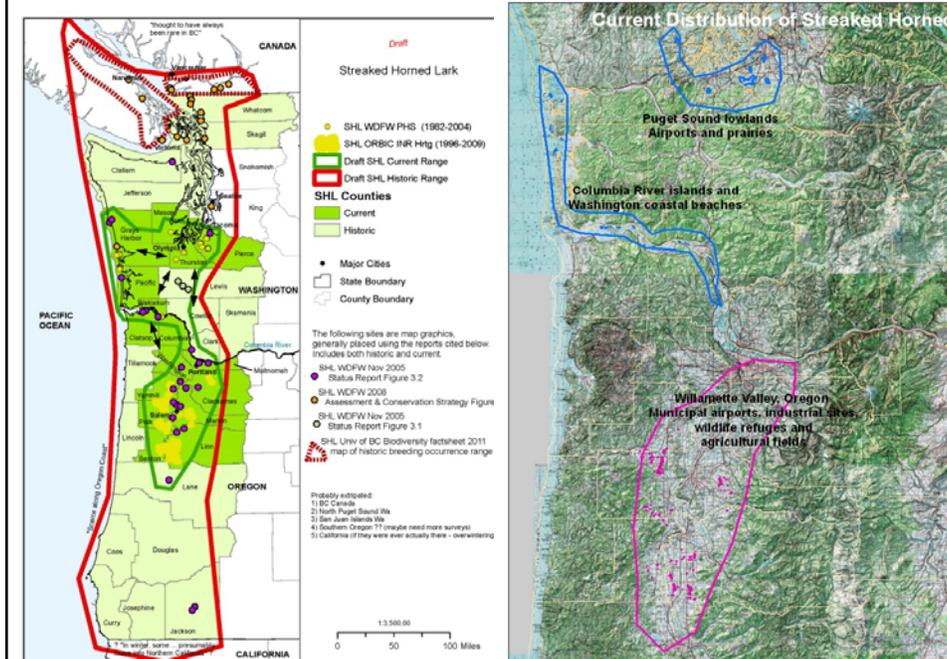
Streaked Horned Lark: Biology, Threats, Conservation, & Management

Biology and Status



- Historically known from BC and San Juan Islands to Rogue and Umpqua Valleys in Oregon
- Currently considered rare and extirpated throughout much of its range with a declining population in WA
- Fewer than 150 to 170 pairs are known from south Puget Sound area
- About 120-140 breeding larks are known from the Washington coasts and Columbia River islands
- Fewer than 1,600 SHL rangewide

Rangewide Distribution of Streaked Horned Lark



Streaked Horned Lark: Biology, Threats, Conservation, & Management

Threats

- Habitat loss through succession of plants that alter habitat structure (lack of low vegetation)
- Conversion of agriculture to other land use
- Invasion of coastal areas by nonnative beach grasses
- Predation
- Recreation impacts
- Aircraft strikes, and
- Military training activities



What actions may impact habitat and/or may harm the species?

- Actions in occupied habitat during the nesting season (late March through August).
- Activities that degrade or make habitat unsuitable
- Actions that could kill, injure or cause significant disturbance to SHL outside of the nesting season
- Activities that encourage dense vegetation
- Reducing/altering the “open landscape”
- Burning, tilling, or farming such that vegetation for food and cover is significantly reduced over a prolonged period (many years).
- Activities that attract crows, jays, predators, and scavengers.
- Military training (in open prairies), aircraft operations

Streaked Horned Lark: Biology, Threats, Conservation, & Management

- The Service has committed to conservation of the lark in both Washington and Oregon
- We have been working with JBLM, CNLM, WDFW, NWR and others to improve habitat for, and get better information about, SHL
- Currently implementing conservation actions including:
 - Creating/maintaining/protecting high-quality prairie habitats
 - Encouraging practices that are compatible with SHL habitat needs
 - Protecting nest sites
 - Restoration of habitat
 - Continuing research and monitoring efforts



Mazama Pocket Gopher



Mazama Pocket Gopher: Biology, Threats, Conservation, & Management

Where they live & what they eat

- Endemic to Thurston & Pierce counties
- Prefer loamy, deep soils; generally <15% slope
- Forage mainly from below the surface of the ground, but occasionally also from tunnel entrance
- Prefer forbs, but will eat most plants. Don't prefer woody vegetation, but have been known to eat rootlets when nothing else was available.
- Prefer areas with <10% woody vegetation cover

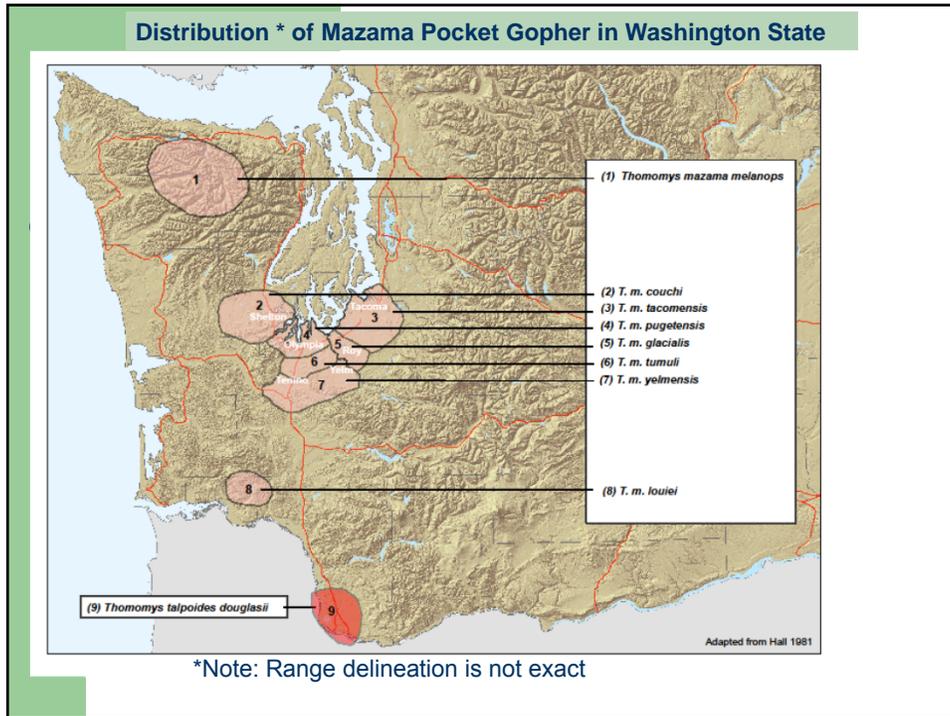


Mazama Pocket Gopher: Biology, Threats, Conservation, & Management

Biology and Status

- Each gopher maintains its own burrow system; they remain active all year
- Home range size averages about 1,076 ft² (100 m²)
- Most disperse fewer than 131 ft (40 m) from their natal territory
- Most live only a year or two; a few live to 3 or 4
- Total population size is unknown; no standardized survey protocol for anything other than presence/absence.
- Largest known populations are on JBLM lands and Olympia airport.





Mazama Pocket Gopher: Biology, Threats, Conservation, and Management

Threats

- Habitat loss or degradation (development, conversion, military training, succession, spread of invasive plants (esp. woody plants))
- Predation
- Inadequacy of existing regulatory mechanisms
- Small or isolated populations
- Control as a pest species



What actions may impact habitat and/or may harm the species?

- Crushing or injury of individuals through any means
- Removing/destroying forage plants in occupied sites
- Collecting or handling any individual
- Trapping or poisoning in areas occupied by MPGs
- Altering otherwise suitable, occupied habitat such that it is no longer navigable by MPGs
 - Compaction of soils (e.g., due to use of heavy equipment, placement of fill), tilling, trenching, digging, flooding, placement of concrete/rock/clay, changing soil hydrology, development, placement of gopher wire
 - Planting woody vegetation or lawns
- Domestic predators (dogs, cats)

Conservation Measures for MPG

- Tree and shrub removal
- Planting forage plants that gophers prefer
- Fencing out predators
- Removal of barriers to movement
- Discrete application of herbicides
- Prescribed burns (size matters)
- All treatments to habitat should be proactively followed with seeding, or planting of native prairie associated species, particularly forbs.

Endangered Species Act, Taylor's Checkerspot Butterfly, Streaked Horned Lark, & Mazama Pocket Gopher

- Based on our evaluation of the best available information and commercial data, status, and threats we have proposed:
- Taylor's checkerspot butterfly as endangered, 
- Streaked horned lark as threatened, and 
- Mazama pocket gopher (4 ssp in Thurston and Pierce counties) as threatened 

Endangered Species Act, Taylor's Checkerspot Butterfly, Streaked Horned Lark, & Mazama Pocket Gopher

- Required to designate critical habitat at time of listing if we can (have the information and CH won't be harmful to species)
- CH determination based on **best available scientific data**, taking into consideration probable **economic and other impacts**
- Secretary of Interior may exclude areas from critical habitat (due to economics, etc.)



Endangered Species Act, Taylor's Checkerspot Butterfly, Streaked Horned Lark, & Mazama Pocket Gopher

- We proposed 6,875 acres (2,782 ha) as critical habitat for the Taylor's checkerspot butterfly in 3 units in the South Sound, Strait of Juan de Fuca, and Willamette Valley
- We proposed 12,159 acres (4,920 ha) as critical habitat for the streaked horned lark in 3 units in the South Sound, Washington coast, Columbia River islands, and Willamette Valley
- We proposed 9,234 acres (3,736 ha) as critical habitat for the Mazama pocket gopher in 1 unit in the South Sound (Thurston and Pierce counties)
- Critical Habitat units overlap for all three species in the South Sound

4D Rule (Special Rule under the Endangered Species Act) and Streaked Horned Lark and Mazama Pocket Gopher

Special rule –modifies standard protections under section 9 for **threatened** species as a means to ***promote conservation efforts***.

In this proposal, covers specified activities associated with

- agriculture
- airport management, and
- single-family residential non-commercial homes
- For the Streaked horned lark and Mazama pocket gopher **ONLY**

4D & the Streaked Horned Lark



Under the proposed special rule,

The prohibitions against take of the **streaked horned lark** caused by activities for **agricultural operations** or **airport safety and maintenance activities** on State, county, private, or tribal lands would be exempt from section 9 of the Act.

The Special Rule **removes the take prohibitions** for these activities to **encourage** landowners to continue those practices that provide habitat for the streaked horned lark – even though these activities cause some adverse effects.

4D & the Mazama Pocket Gopher



Under the proposed special rule,

The prohibitions against take of the **Mazama pocket gopher** caused by **activities for agricultural operations, ongoing small landowner noncommercial activities, airport safety and maintenance activities** on State, county, private, or tribal lands would be exempt from section 9 of the Act.

The Special Rule **removes the take prohibitions** for these activities to **encourage** landowners to continue those practices that provide habitat for the Mazama pocket gopher – even though these activities cause some adverse effects.

The Special Rule would exempt:

Routine agricultural and ranching activities including:

- Planting
- Harvesting
- Mowing
- Grazing
- Irrigation
- Maintenance of fences, stock ponds & berms



Management activities at airports

- Actions to minimize hazardous wildlife
- Maintenance of roads and runways
- Mowing
- Herbicides
- Hazing
- Management of forage water and shelter



The Special Rule would exempt:

Ongoing Small Landowner Noncommercial Activities (for Mazama pocket gopher):

- Vegetative management through mowing or herbicide use
- Construction of small outbuildings including kennels, storage sheds and carports
- Fences
- Garden Plots



Overarching View of the Process

Steps in the Proposed Listing and Critical Habitat Process

- Draft notice of listing (includes status review)
- Publish Proposed Rule in Federal Register
- Request comments and information from public
- Conduct peer review
- Complete economic analysis for PCH, reopen comment period and request comments
- **Revise proposal** considering public and peer review comments, and economic analysis and comments
- Publish Final Rule

Next steps

- Economic analysis (EA) document available for public review and comment, spring 2013
- The comment period will reopen for full proposed rules for both species when open for EA
- **Will revise proposal** considering public and peer review comments, and economic analysis and comments
- Final Rule due to Federal Register Fall 2013

QUESTIONS ?

