

ENVIRONMENTAL FACT SHEET

Endangered Species at Camp Edwards and the Massachusetts Military Reservation (MMR)

This fact sheet is part of a series of fact sheets to address community concerns and answer questions on environmental issues associated with the Massachusetts Military Reservation (MMR). Terms identified in **bold** are defined in the glossary.

THE ENVIRONMENT OF CAMP EDWARDS AND THE MMR

Used for many decades as a military reservation, the MMR contains the single largest tract of open space on Cape Cod. With much of Cape Cod extensively developed, many species of plants and animals lack sufficient habitat to thrive. Rare species of plants and animals are having greater success on the MMR, and especially Camp Edwards, due primarily to the lack of habitat fragmentation and development.

Camp Edwards has diverse **habitats**, some of which are unique to Cape Cod. Camp Edwards and the MMR contain the largest pine-barrens north of the renowned New Jersey Pine Barrens. Much of the southern portion of Camp Edwards contains grassland habitats, which are inhabited by grasshopper- and vesper sparrows and upland sandpipers, each a **state-listed** species.

The MMR has been used for military training purposes since 1911. The area has been used for military training maneuvers, operations, maintenance, and support. Development on the MMR has historically included barracks, parade grounds, runways, and other training facilities. Past military training has had both positive and negative impacts on what are now endangered species habitats through disturbances such as clearance of large tracts of land for training purposes. However, as military training operations have changed at Camp Edwards and the MMR, much of the land has reverted to forests and fields.

WHAT ENDANGERED SPECIES LIVE AT CAMP EDWARDS AND THE MMR?

Currently there are no known federally listed species inhabiting Camp Edwards or the MMR, yet there are 37

species identified as **threatened, endangered, or of special concern** by the Commonwealth of Massachusetts including:

- ?? 3 species of plants
- ?? 19 species of moths/butterflies
- ?? 2 species of turtles
- ?? 8 species of birds
- ?? 5 species of dragonflies & damselflies

These organisms fall into four broad groups:

1. Species that require large unfragmented sections of forest, such as the box turtle
2. Species that are pine and scrub oak barrens specialists, such as most of the rare moths
3. Species that occur in wetland areas, such as Torrey's beakrush
4. Species that require grasslands, such as the upland sandpiper

One of the most interesting inhabitants of Camp Edwards is so rare that, until recently, it had not been included on the State's endangered species list. The Pink-Streak Moth (*Faronta rubripennis*) was last reported in Massachusetts on Martha's Vineyard in the 1930's, and on Nantucket in 1940. Since that time, the insect had not been recorded in Massachusetts and was considered locally extinct. Because of its absence from the State, the species had never been proposed for inclusion on the State's endangered species list. An individual Pink-Streak Moth was recorded in the Camp Edwards Cantonment Area in 1996 during moth surveys conducted by the Lloyd Center for Environmental Studies. In 1997, 21 individuals were recorded and in 2001, 45 individuals were recorded from a single locale, suggesting that the species still persists within the state, with Camp Edwards harbouring the largest known population. Due to the rediscovery of the Pink-Streak Moth at Camp Edwards, it has since been listed as "threatened."

PROTECTION OF ENDANGERED SPECIES AT CAMP EDWARDS AND THE MMR

This fact sheet was developed through a collaborative effort of the MA National Guard Environmental & Readiness Center (E&RC), Air Force Center for Environmental Excellence (AFCEE), U.S. Environmental Protection Agency (EPA), Massachusetts Department of Environmental Protection (DEP), and the Joint Program Office (JPO).

The Mass. National Guard Environmental & Readiness Center's (E&RC) Natural Resources Department is the organization responsible for managing the ecological character and endangered species of Camp Edwards. This office is staffed with four full-time personnel, all with advanced degrees, and up to seven seasonal professionals. In order to develop effective scientific research programs that enhance the ecology of Camp Edwards, the Natural Resources Department has developed working relationships with environmental agencies and organizations such as:

- ?? U.S. Fish & Wildlife Service
- ?? Massachusetts Division of Fisheries & Wildlife
- ?? Massachusetts Department of Environmental Management
- ?? Massachusetts Department of Environmental Protection
- ?? Wampanoag Tribe of Gay Head (Aquinnah)
- ?? Massachusetts Audubon Society
- ?? The Nature Conservancy
- ?? Lloyd Center for Environmental Studies (University of Massachusetts/Dartmouth)
- ?? New England Wildflower Society

The Air Force Center for Environmental Excellence (AFCEE) also complies with all applicable State and Federal endangered species regulations. For example, rare species surveys are conducted before fieldwork is started. The results of these surveys, as well as a detailed project description, are made available to the Massachusetts Natural Heritage and Endangered Species Program as part of an environmental site review. For projects that occur on Massachusetts Army National Guard properties, a "Record of Environmental Consideration" is submitted to the E&RC's Natural Resources Department. For instance, AFCEE does not perform any disruptive activities in the native grassland fields at MMR between April 30 and August 15 because of potential harm to ground-nesting birds. Also, nesting surveys are done before collecting groundwater samples to avoid crushing nests.

The Coast Guard Air Station also follows similar steps on its projects. Prior to starting, Air Station Cape Cod performs what is called a "Natural Resource Determination", which assesses which natural resources, including endangered species, may be impacted, if at all. It also spells out what will be done to minimize or prevent any impacts. This determination is then included in the Environmental Assessment Check List that is done according to the National Environmental Policy Act (NEPA).

RESEARCH PROGRAMS

Several research programs are in place at Camp Edwards and the MMR. These include the Army's Integrated Training Area Management (ITAM) Program and the Integrated Natural Resource Management Plan, required

by all military service installations. Some of the past and present research and surveys conducted at the MMR include:

- ?? Complete Floristic Survey of Camp Edwards (1993-1995)
- ?? Rare Plant Survey (1994-present)
- ?? Fire History, Ecology, and Management Plan (1998-1999)
- ?? Grassland Bird Surveys (1994-1998)
- ?? Impacts of Bivouac Site Development on Scrubland Nesting Birds (1995)
- ?? Use of Broadcast Calls to Survey Cooper's Hawks (1997)
- ?? Eastern Box Turtle Microhabitat Selection and Home Range Use (1998-present)
- ?? Massachusetts Herp Atlas Survey (1995-1996)

As mentioned above, fire management is an on-going research area at Camp Edwards and the MMR. Wildfires are a natural and necessary part of the ecology of Cape Cod, particularly for the pine and scrub oak barrens habitats. Without fire, scrub oak barrens would grow into pitch pine-oak forest that would not support many of the rare animals currently found on MMR. Also, suppression of wildfires has resulted in a significant buildup of vegetation, or fuels, susceptible to burning. This makes the potential danger from uncontrolled wildfires even greater. Through careful planning with government and non-profit environmental agencies, prescribed fire is used as a management tool to maintain the **biodiversity** of Camp Edwards and the MMR, thereby protecting the treasure trove of flora, fauna, and endangered species that we all strive to protect.

GLOSSARY

Habitat: the place or environment where a plant or animal naturally or normally lives and grows

State-listed: species that are listed by the Massachusetts Division of Fisheries and Wildlife as being either threatened, endangered, or of special concern, and protected under the Mass. Endangered Species Act

Endangered: a species threatened with extinction

Threatened: having an uncertain chance of survival

Special-concern: any plant or animal species which has been documented as suffering a decline that can cause an adverse response

Biodiversity: biological diversity in an environment as indicated by numbers of different species of plants and animals

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FOR MORE INFORMATION

Some websites of interest include:

Massachusetts National Guard Environmental & Readiness Center - Natural Resources Department	www.ceenvironment.net
US Army ITAM Program	www.army-itam.com/main.htm
Air Force Center for Environmental Excellence - Installation Restoration Program	www.mmr.org
Massachusetts Division of Fisheries & Wildlife, Natural Heritage and Endangered Species Program	www.state.ma.us/dfwele/dfw/nhesp/heritage.htm
Wampanoag Tribe of Gay Head (Aquinnah)	www.wampanoagtribe.net