

Eastern Chipmunk

Tamias striatus



Photograph by Laura Wagner, Clemson University.

Species Overview

Status: Removed from Florida's Endangered and Threatened Species List.

Current protections:

- 68A-1.004, F.A.C., Take – The term take shall include taking, attempting to take, pursuing, hunting, molesting, capturing, or killing any wildlife or freshwater fish, or their nests or eggs by any means whether or not such actions result in obtaining possession of such wildlife or freshwater fish or their nests or eggs.
- 68A-4.001, F.A.C., General Prohibitions and Requirement – Prohibits the take, transport, sale, and possession of wildlife.
- 68A-29.002, F.A.C., Rules relating to the Taking of Mammals – Prohibits take, transport, sale, purchase or possession of certain species of mammals unless authorized by 68A-9 or 68A-24, F.A.C.

Biological Background

This section describes the biological background for this species and provides context for the following sections. It focuses on the habitats that support eastern chipmunks, and the threats faced by the species.

The eastern chipmunk inhabits deciduous forests throughout its range in eastern North America. Preferred habitat in Florida is hardwood hammock and mixed hardwood-pine forests having oaks as the dominant species, especially in areas where those habitats are associated with mixed wetland forests along or near streams and rivers (Gore 1990, Winchester and Gore 2015). The eastern chipmunk is not evenly distributed across its range in the northwestern portion of the Florida panhandle, and much of the deciduous forest habitat that appears suitable remains unoccupied (Gore 1990; Winchester and Gore 2015). Multiple, secure refuges from predators (e.g., rock crevices) are expected to be important resources for individual chipmunks within their home ranges, along with elevated sites (e.g., downed logs) that provide a good view of the surrounding area (Snyder 1982). Chipmunks also may occur in urban, residential areas where hardwood trees, artificial refugia (e.g., under porches or sheds, or in rock walls), and supplemental food resources (e.g., bird feeders) are available (Ryan and Larson 1976, Yahner 1987, Winchester and Gore 2015).

Individual chipmunks live in separate burrows within home ranges that may partially overlap (Yerger 1953, Yahner 1978). Individuals are active during the day, mostly within 15 m (50 ft) of a burrow (Yahner 1978, Snyder 1982), which is considered the core area for that individual. Adult chipmunks will aggressively defend the core area of their range against other chipmunks (Yahner 1978). Yahner (1978) found that burrows of different individuals were separated by an average of 35 m (115 ft).

Density of eastern chipmunk populations varies over time and geographically, ranging from 0.3 to 37.6 individuals per 1 ha (2.5 ac; Yerger 1953). Adult breeding female density is probably determined by the availability of food resources, while male density seems to be dependent on female density (Galloway and Boonstra 1989). Clear-cutting of forests has no significant effect on eastern chipmunk population densities or age structure, but forest fragmentation decreases chipmunk survival rates (Mahan and Yahner 1998, Nupp

and Swihart 1998). In farmland woodlots, density decreases with increasing area and isolation of habitat (Reunanen and Grubb 2004).

Threats

A Biological Status Review (BSR; FWC 2015) found that the eastern chipmunk did not meet the criteria for state listing in Florida. A study by Winchester and Gore (2015) found that though chipmunks remain uncommon in Florida, the range had not declined since studies in the late 1980's, with chipmunks confirmed in several new areas within the range. In the more recent studies, chipmunks were often associated with residential areas, and increases in residential areas as well as increases in availability of hardwood hammocks may explain the range expansion. The eastern chipmunk is listed as a species of Least Concern by the International Union for Conservation of Nature (IUCN) because it is widespread, abundant, and subject to no major threats (Linzey and Hammerson 2008). A web-based survey (Winchester and Gore 2015) on chipmunk presence documented multiple instances of chipmunk mortality due to feral or free ranging cats. As residential areas expand, this threat may warrant future monitoring.

Distribution and Survey Methodology

The range map represents the geographic area encompassing all observations of individuals of a species, including intervening areas of unoccupied habitat. This map is informational only and is not for regulatory purposes.

Counties: Escambia, Holmes, Jackson, Okaloosa, Santa Rosa, Walton.

Recommended Survey Methodology

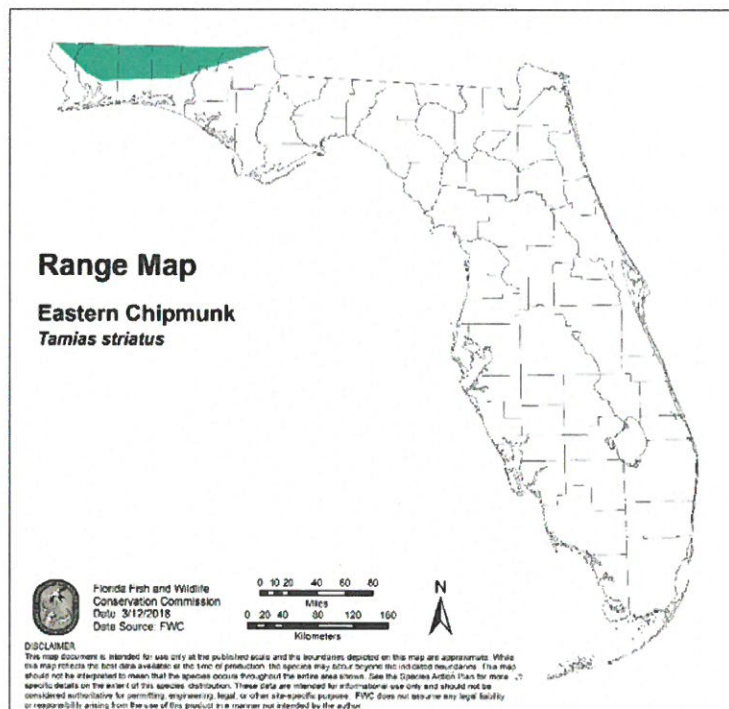
Surveys can be used to determine if eastern chipmunks are present in an area. Surveys are not required for any activity.

Winchester and Gore (2015) found that camera traps were as effective as live trapping to detect chipmunks. To maximize likelihood of detection, sites should be surveyed for 14 days using 5 cameras within a 250-m (820-ft) radius; cameras should be placed at least 50 m (165 ft) apart. Baiting cameras with food within a few meters of the camera can improve survey results. Use of camera traps does not require a permit.

Recommended Conservation Practices

Recommendations are general measures that could benefit the species but are not required. No FWC permit is required to conduct these activities.

- Retain/maintain hardwood hammocks in the northwest part of the panhandle, especially near areas of mixed wetland forest.
- Maintain or enhance habitat connectivity.



- Minimize mortality from cats by keeping cats indoors. Do not maintain feral cat colonies near or on public lands or near parks in residential areas.

Prohibitions and Permitting

Eastern chipmunks are protected by the general prohibitions outlined in Rule 68A-4.001, F.A.C.: no wildlife or freshwater fish or their nests, eggs, young, homes, or dens shall be taken, transported, stored, served, bought, sold or possessed in any manner or quantity at any time except as specifically permitted by these rules nor shall anyone take, poison, store, buy, sell, possess or wantonly or willfully waste the same except as specifically permitted these rules. They are also protected by 68A-29.002, F.A.C. which states that no person shall take, buy, sell, or possess more than one Eastern chipmunk. Take is defined in Rule 68A-1.004, F.A.C., as pursuing, hunting, molesting, capturing, or killing (or attempting to do those things). A permit is required for any other activity that involves the capture, sell, purchase, transport, hunting or killing of chipmunks. These permits are issued for justifiable purposes as outlined in Rule 68A-9.002, F.A.C. Justifiable purposes are scientific, educational, exhibition, propagation, management or other justifiable purposes.

No Permit Needed

The following activities could cause take, but are authorized in rule to be conducted without a permit:

- One eastern chipmunk may be maintained as a personal pet without a permit (Rule 68A-29.002 F.A.C.); however, take of individuals from the wild for this purpose is not authorized.
- Chipmunks may be taken as nuisance wildlife without a permit if following the methods outlined in Rule 68A-9.010 (2) and (3), F.A.C.

Permits for Justifiable Purposes - Scientific Collecting and Educational Use

Any survey methodology that requires handling or capture of a chipmunk will require a scientific collecting permit. Maintaining chipmunks in captivity for educational use also requires a permit.

- Scientific collection and educational use permits are no-fee permits. Applications must be submitted using the information provided in the [Scientific Collecting Permit Application Checklist](#).
- Trapping may impact the wild population's ability to forage, rest, and rear young. The trapping protocol must be included with the permit application, with sufficient detail to allow evaluation, and should identify measures to minimize mortality to chipmunks and non-target species.
- Applicants for scientific collecting permits should identify if trapping will occur on lands owned by other entities. Coordination with county land managers, state foresters, and national parks should be addressed in the scientific collecting application.
- Permit applications for educational use should include an educational purpose plan, the location of the educational facility and provide details on housing for chipmunks.
- A summary of the applicant's expertise relative to the proposed work must be included in the application.
- Applicants should have met all conditions of previously issued permits for fox squirrels or other species. Camera-based and walking transect surveys do not require a scientific collecting permit.
- A summary of any survey data collected at each study site should be reported to the FWC.
 - Standard data should include numbers captured by species, location information (GPS coordinates, county, property/site name), and habitat type.
 - Report standard data for every chipmunk collected or observed.
 - Any mortality should be reported immediately to the FWC. Specimens should be provided to the FWC or deposited in the collection of the Florida Museum of Natural History in Gainesville.
- Data gathered should be provided to the agency in the specified format.

Other Permits

For any other justifiable purpose permit that does not fall under scientific collecting or educational use, please submit your request to WildlifePermits@myfwc.com.

Additional information

Information on the economic impacts assessment of the Species Conservation Measures and Permitting Guidelines for the Eastern Chipmunk can be found at <http://myfwc.com/wildlifehabitats/imperiled/managementplans/>.

Contact

For more species-specific information or related permitting questions, contact us at (850) 921-5990 or WildlifePermits@myfwc.com. For regional information, visit <http://myfwc.com/contact/fwc-staff/regional-offices>.

Literature Cited

- Florida Fish and Wildlife Conservation Commission (FWC). 2011. Eastern chipmunk biological status review report. Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida.
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- Winchester, C. and J.A. Gore. 2015. Evaluating eastern chipmunk population status in Florida. Final Project Report. Florida Fish and Wildlife Conservation Commission. Tallahassee, Florida.
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Applicant Guidance:

Scientific Collecting Permits for State-Listed Species

The following information is provided as guidance to assist applicants in submitting a complete and sufficient application that includes all information necessary to determine whether the application meets criteria to issue a permit. Submitting a complete and sufficient application can expedite the permitting process by preventing delays triggered by missing information.

Permit Application Checklist

You will need to gather or have access to the information below in order to complete and submit the application in the [Online Permit System](#).

To register as a new user, you will need:

- To determine if you are registering as an Individual or Non-Individual (business or other entity) Applicant.
- Applicant's contact information including name, physical and mailing addresses, phone and fax numbers and email address.
- Applicant's social security number or driver's license state of issuance and number. If applying as Non-Individual, you will need the organization's FEIN/FEID number and name of contact person.
- To also apply for a self-issuing Registered Agent permit in the [Online Permit System](#) (this only applies to those applications requesting to designate sub-permittees). Once issued, you can manage sub-permittees who have delegated approval to work under the permit in your absence.

To apply for a scientific collecting permit, you will need:

- Your user name and password (created when registering as a new user).
- Project name, description, address, and driving directions.
- To identify project activity as either: bird banding, live possession, salvage, scientific collecting (multi-purpose or undefined activity), or voucher.
- To list the project county/counties, township, range and section, latitude, longitude and parcel identification number (if applicable).
- A summary of research/educational scope and objectives, target species, methodology, final disposition.
- Information from previous state-issued permits.

You will need the following attachments:

- A research plan detailing the purpose, scope, objectives, methodology and disposition of the proposed scientific work, or an educational plan and documentation of the facility's wildlife conservation program (*required*).
- Benefit to Survival Potential (*required*; [see next page](#)).
- Copies of current or former state-issued permits (*if applicable; outstanding reports for prior permits must be provided before permits will be issued.*)
- A wildlife acquisition form/letter, and supporting documentation such as photographs, brochures, published research material, (*required* to document listed species legally obtained).

Attachments may be uploaded as part of the online application. The following file types are accepted: *.doc, *.docx, *.xls, *.xlsx, *.pdf, *.txt, *.ppt, *.png, *.tif, *.gif, .jpg, and *.jpeg. There is no limit to the number of attachments; however, the online system will only accommodate attachments that are each 20 megabytes or less.

Factors considered when issuing permits

Intentional take permits (including scientific collecting and educational use) for state-Threatened species may be issued for purposes that further the conservation or survival of the species. FWC staff considers the factors outlined in Rule 68A-27.003(2), [F.A.C.](#), when determining if an application will benefit the survival potential of the species. These factors are presented below with additional information to assist applicants in submitting a complete application.

[Species Conservation Measures and Permitting Guidelines](#) (Guidelines) can inform applicants about species-specific permitting considerations. Guidelines include sections on intentional take and scientific collecting. Consulting the Guidelines is strongly encouraged as a first step in preparing your application. For species that do not yet have Guidelines developed, refer to the [Species Action Plan](#).

Benefit to Species' Survival Potential:

Please respond to each of the following questions. Responses should be submitted as an application attachment in the online permit system. The attachment should be titled "Benefit to Survival Potential".

1. Is the project's purpose adequate to justify removal of specimens?
If specimens will be removed from the wild, outline the consistency with the goals and objectives of the Species Action Plan to justify removal.
2. What probable direct or indirect effect will the project have on the wild population?
If proposed activities may affect the wild population, explain what the probable effects are, and if the effect furthers conservation and survival. If it does, explain how. Explain any measures that will be taken to minimize potential effects to the wild population.
3. Does the project conflict with any programs intended to enhance the survival of the species?
Refer to the [Guidelines](#) or [Species Action Plan](#) for the species to determine if any proposed activities in the application conflict with the conservation actions identified for the species.
4. Will the project likely reduce the threat of extinction?
Explain how the proposed activities in the application will provide a conservation or scientific purpose that addresses the threat of extinction. Refer to the [Biological Status Review Report](#) for the species for factors contributing to risk of extinction. The Species Action Plan also outlines threats to the species and conservation actions to address those threats.
5. What are the opinions and views of experts?
Opinions of those with species expertise will be considered during application review. Include any known relevant opinions, along with the individual or organization from which they originate.
6. Are the expertise, facilities, and resources available to the applicant adequate to accomplish the project objective?
Document the experience, knowledge, and capability of all individuals listed on the permit application (if you are a Registered Agent, please upload this information for yourself and anyone authorized to work under the permit to your account). Document the adequacy of facilities and equipment available to you to conduct the proposed activity.
7. Is there a concern for human safety?
If applicable, document any relevant risk to human safety posed by the species, and demonstrate that available deterrent methods have been exhausted.