



Getting the Most from Online Fire Resources: Fire Effects Information System

SFE Fact Sheet 2015-2

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WHAT IS THE FIRE EFFECTS INFORMATION SYSTEM?

When planning a prescribed fire or other fire management project, how often does this question cross your mind: How will the fire impact a particular animal or plant species? Or maybe the question is even broader: What do we know about the general biology and ecology of a particular species? Since 1986, answers to those questions have been available through the Fire Effects Information System (FEIS) at <http://www.feis-crs.org/feis/>.

FEIS includes summaries and reviews of the scientific literature on life history, general ecology, and fire ecology and effects for over 1,100 plant and animal species in the United States, including 182 invasive plant species. FEIS also contains other types of reviews: Fire Studies describe more than 150 research projects that address fire effects on multiple species at specific locations. The information from these studies complements individual Species Reviews and also provides information on hundreds of species for which Reviews are not available. Fire regime information is available for 256 vegetation communities across the country, including 25 communities in the southeastern United States. Fire Regime syntheses, currently being developed, combine information from the scientific literature with LANDFIRE Vegetation Models to describe fire regimes. Each year, the FEIS staff at the USDA Forest Service’s Fire Sciences

Laboratory at the Rocky Mountain Research Station write or update 15 to 30 Species Reviews, Fire Studies, and Fire Regime Syntheses.

USING THE FIRE EFFECTS INFORMATION SYSTEM

For the wealth of information it contains, FEIS is exceptionally easy to use. To locate information about a particular species, just enter the common or scientific name of the species in the open box under ‘Find Species Reviews’ on the home page (example: gopher tortoise, Figure 1). Click on ‘Enter Species’ to locate information about the Species Review (Figure 2), then click on the blue ‘GOPO’ acronym (left-center on your screen) to pull up the actual review (Figure 3).

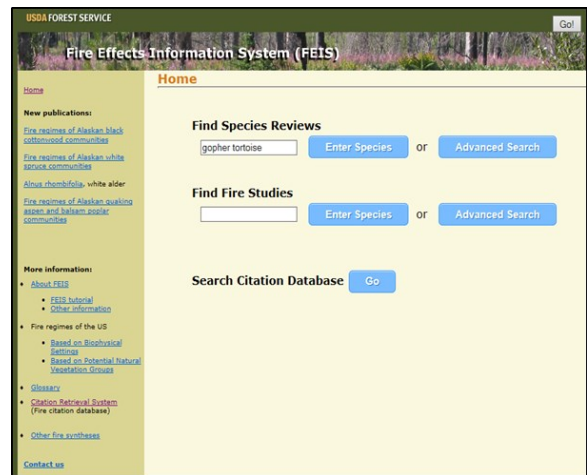


Figure 1. FEIS home page ready to search for the review of gopher tortoise.



Figure 2. Results of the initial search for gopher tortoise.

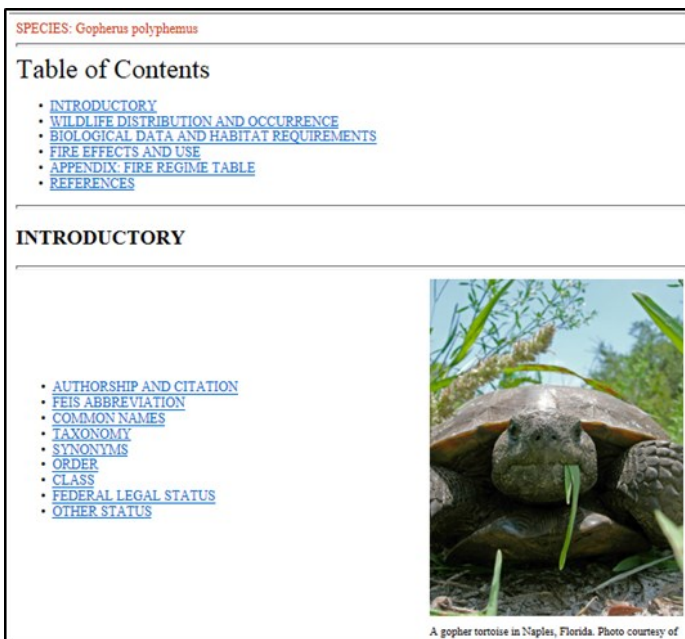


Figure 3. First page of the gopher tortoise species review.

Gopher tortoise is an excellent example of the detail available in FEIS, which depends on the breadth of relevant research. This particular Species Review was published in 2009 and based on 159 research publications, theses and reports. It includes a thorough analysis of habitat and food requirements, life history, basic biology, management impacts and implications, and fire effects. For many other species, there has been considerably less research and the Species Reviews may be somewhat older and shorter, but they all address fire effects and management considerations.

Figure 4 gives you a taste of the information available in the 'Fire Effects' section of a Species Review. This review of longleaf pine was written in 1992.

Another way to search for Species Reviews is by clicking the top 'Advanced Search' button in Figure 1 without entering a species name in the blank box where 'gopher tortoise' was typed. The Advanced Search window (Figure 5) offers seven options for filtering your search, including some for limiting the geographic scope of the search. Once you select your options, use the 'Go' button at the bottom to obtain a list of the Species Reviews that meet your search criteria (Figure 6). The number of Species Reviews is displayed at the top of the list. A different set of filters can be searched after clicking on the 'Clear' button at the bottom of Figure 5. (Click 'Clear' after every search even if you are going to change just one filter.)

As an example, the results of a search for non-native, invasive trees in Alabama produced the list in Figure 6. Click on any of the six-letter acronyms at the left to see that Species

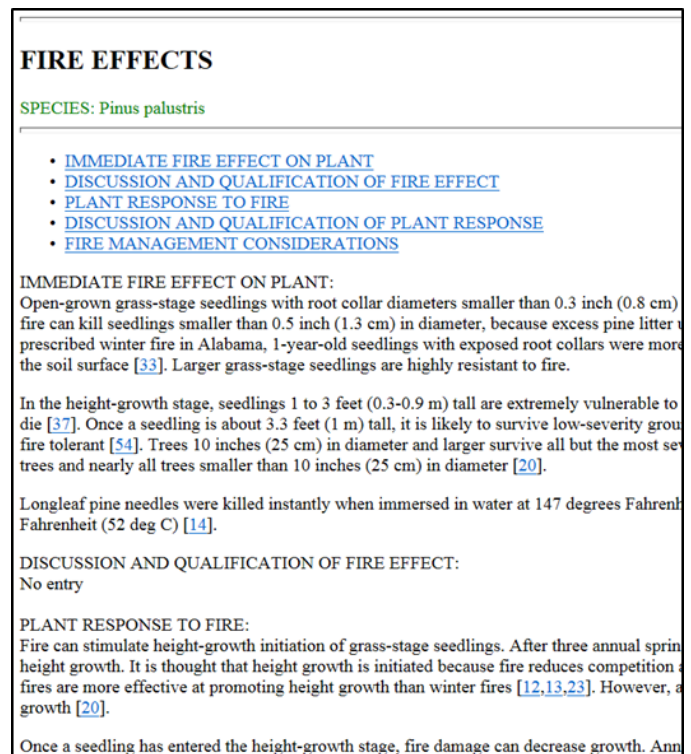


Figure 4. Excerpt from the Fire Effects section in the FEIS Species Review of longleaf pine.

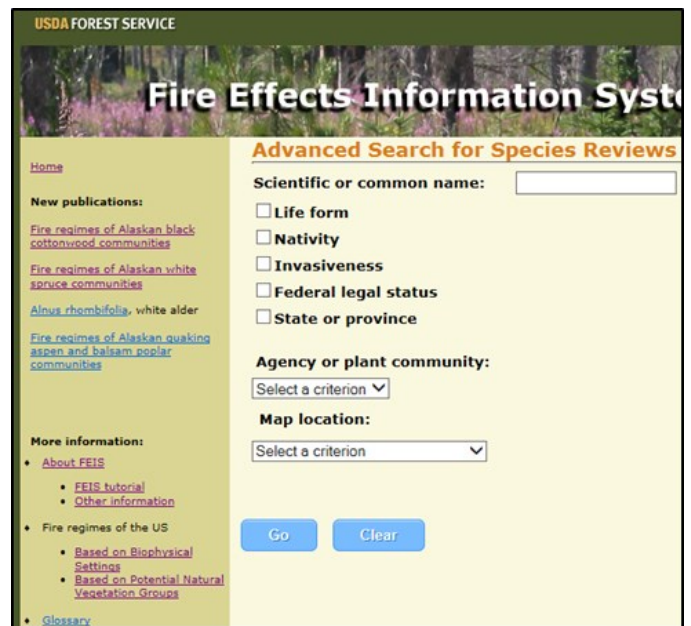


Figure 5. Options for the Advanced Search for FEIS Species Reviews.

Review. Or, in the case of Chinaberry, you can also click on the 'Available Fire Study' in the far right column to find more information on Chinaberry and other species that were described in a particular research project.

Select 'Fire regimes of the US - Based on Potential Natural Vegetation Groups' (on the left navigation bar, Figure 1) for a table that lists plant communities and their characteristic

Advanced Search Results for Species Reviews

Results for: **Nativity = Nonnative AND Invasiveness = Invasive AND (Life form = Tree) AND (State = AL)**
Number of Species Reviews returned: 9

[Export Table](#) [New Search](#) [Revise](#)

State, province, and country searches are based on species distribution data obtained mostly from the [PLANTS Database](#).

Acronym	Scientific Name	Common Name	Date	Fire Regime Syntheses	Fire Studies
AIALT	<i>Ailanthus altissima</i>	tree-of-heaven	2010		Not Available
ALBJU	<i>Albizia julibrissin</i>	mimosa	2010		Not Available
ELAUM	<i>Elaeagnus umbellata</i>	autumn-olive	2003		Not Available
LIGSPP	<i>Ligustrum amurense</i> , <i>L. japonicum</i> , <i>L. sinense</i> , <i>L. vulgare</i>	Amur privet, Japanese privet, Chinese privet, European privet	2003		Not Available
MELAZ	<i>Melia azedarach</i>	chinaberry	2009		Available
MORAL	<i>Morus alba</i>	white mulberry	2009		Not Available
PAUTQ	<i>Paulownia tomentosa</i>	princess tree	2009		Not Available
POPSPP	<i>Populus alba</i> , <i>P. x canescens</i> , <i>P. x heimbuergeri</i> , <i>P. x rouleiiana</i> , <i>P. x tomentosa</i>	white poplar, gray poplar, Heimbuerger's poplar, Roulivau's poplar, Chinese white poplar	2010		Not Available
TRISE	<i>Triadica sebifera</i>	tallowtree	2011		Not Available

Figure 6. Results of an advanced search for Species Reviews using the filters listed at the top of the screen.

fire severities and frequencies. The 25 Southeast communities are at the bottom of the scroll-down list; just click on the link for ‘Southeast’ at the top of the table to find them. Clicking on each community name (left column) brings up a summary of literature and relevant LANDFIRE information. Complete literature reviews of fire regimes are also available from the left navigation bar: Select ‘Fire Regimes of the US – Based on Biophysical Settings’ for syntheses of information on historical fire frequency, spatial pattern, extent, and seasonality; historical ignition sources; typical patterns of fire intensity and severity; and contemporary changes in fuels and fire regimes. These Fire Regime Syntheses are a new product in FEIS, so the collection is currently incomplete.

FEIS also has a Glossary (lower left navigation panel) to help with terms used in the Reviews. For example, the definitions of nonnative and invasive clarify two concepts that can be confusing but are important as you use different combinations of the Nativity and Invasiveness filters in the Advanced Search window.

Finally, if you want to go beyond the FEIS Reviews and dig into the literature yourself, go to ‘Search Citation Database’ at the bottom of the search screen (Figure 1, middle) and click on ‘Go.’ This gives you access to the 59,000-plus citations in the FEIS literature database and Fire Effects Library. Familiarize yourself with the search procedure and keyword system to get the best results – or contact the friendly FEIS staff for suggestions (‘Contact us’ at the bottom of the left navigation bar).

SUMMARY

FEIS is an invaluable resource for locating a wealth of information about individual plant and animal species as well as natural communities. Basic biology to fire effects? It’s all there. It may have helped you write term papers back in school; it’s even more important now to aid you in fire and resource management planning. Use it!

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