

## 6. Crustaceans

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There are 338 crawfish species in the United States, the southeast being the world's hotspot for crawfish diversity (Taylor et al. 1996). Thirty-four crawfish species are known to occur in Louisiana (Crandall and Fetzner 2001; J. Walls, personnel observation). Fourteen of these crawfish species are considered critically imperiled, imperiled, or rare and local by the LNHP (2002), including two endemic species, the Calcasieu painted crawfish (*Orconectes blacki*) and Kisatchie painted crawfish (*Orconectes maletae*). Regardless of the preferred habitat, the viability of many of the rare crawfish is threatened because of their small ranges. Any habitat degradation severe enough to cause extirpation of these species at a single site or sites could also lead to their extinction (Taylor et al. 1996).

Crustacean species included in this plan (Appendix F) are those currently tracked by the LNHP because they are considered to be critically imperiled or imperiled due to their rarity or vulnerability. Furthermore, the current list of crustacean species tracked by the LNHP was reviewed by experts (Appendix C) and their comments were incorporated into the list.

## 7. Butterflies

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The LNHP does not currently track butterflies species, nor does it have current data on the status of this taxonomic group in Louisiana. However, LDWF's strategy committee has agreed that efforts should be made to include butterfly species as targets within the CWCS. University experts (Appendix C) were consulted and asked to provide information on Louisiana's current butterfly diversity and their biological status, along with recommendations on which species are of conservation concern (Appendix F).

## E. Habitats

Developing a species conservation strategy must begin with identifying habitats or natural communities present within the state and assessing:

- their importance to species of conservation concern
- threats facing each habitat
- the habitat's viability

Once this is accomplished the habitats are then ranked.

The habitat types within the state have been separated into terrestrial and aquatic systems. Separate categories allow for a thorough review of habitats within the two systems, and facilitate implementation of conservation actions based on similarity of management techniques and strategies. Terrestrial systems include all habitat types

(wetlands and uplands) that are important to birds, mammals, amphibians, reptiles, and butterflies. Aquatic systems include the bayous, streams, rivers, marshes, and lakes and bays that are important to fish, mussels, crustaceans, and many reptile species (turtles).

## **1. Terrestrial Habitats**

Natural communities are composed of groups of plant and animal species that regularly or often occur in association with each other in certain landscapes or physical environments. Habitat types are the specific natural communities where a plant or animal resides or is ordinarily found. Nature is seldom divided into discrete units and is characteristically composed of a continuous mosaic of natural communities. The factors that help to define a particular community (i.e., associated vegetation, soil, substrate, hydrology, topography, climate, fire history) usually exist along gradients, and therefore every occurrence of a natural community will be unique in some way. The habitat classification developed for the strategy has levels of distinctiveness that are defined according to the physical and biotic factors that occur repetitively at various locations, and are recognized as habitat or potential habitat for native wildlife species occurring within Louisiana.

A system for classifying natural communities and an inventory of a region's natural resources are essential for a complete understanding of the natural resources of that region, and also provide the framework for determining the area's protection priorities and research needs. Protecting natural communities preserves the ecological functions of the area while also providing the added benefit of safeguarding both the rare and common species occurring within that community type.

The terrestrial habitat types described in this document are based on the natural community classification outlined by LNHP (1986-2004) which was developed using the National Vegetation Classification (NVC). The NVC system, created by TNC to address the needs of their conservation planning and programs, is now accepted as a classification standard used by all federal agencies (Grossman et al. 1998, Anderson et al. 1998). Some of the natural community types in the LNHP document were combined based on similarities in floristics and management strategies. It should be noted that the term terrestrial is used loosely here to refer to all non-aquatic habitats associated with a soil substrate and having emergent to upland vegetation types.

Appendix G lists the terrestrial habitat types of Louisiana by ecoregion within the state and provides state and global rankings assigned to each habitat type by LNHP. Accurate mapping of habitat distributions is not currently possible for many terrestrial types due to data gaps, but general vegetation distributions are available. Figure 3.1 contains a broad view of presettlement natural vegetation types within the state (Newton 1972). Louisiana contains six ecoregions (Fig. 2.3) or areas of general similarity in ecological systems and natural resources present to those areas. Terrestrial habitat types were assigned by ecoregion to facilitate viability and stress assessments of those habitat types and the development of conservation strategies. Strategies were structured based on threats ongoing in each particular ecoregion of the state that potentially affect wildlife

habitats. State ranks are developed by LNHP and global ranks by NatureServe based on research, scientific literature, statewide inventories, and consultation with scientific experts.

## 2. Aquatic Habitats

Aquatic habitats were separated into two categories: freshwater and marine systems. Freshwater systems were assessed by management basin as defined by the LDEQ (Fig. 2.11)<sup>2</sup>. Habitats within basins were assessed by the following stream type designations: backwater, head water, main channel, side channel, and tributary. Marine systems assessments were based on geomorphic features of the water bottoms located in Louisiana's coastal waters. Marine habitats included: soft mud bottom, shell/shellhash bottom, hard mud/clay bottom, sandy bottom and open water.

As with terrestrial habitats, strategies for aquatic habitats were structured based on threats ongoing in each particular basin, or the coastal waters that potentially affect wildlife habitats. Unlike terrestrial habitats, there are no state or global rankings developed for these habitats.

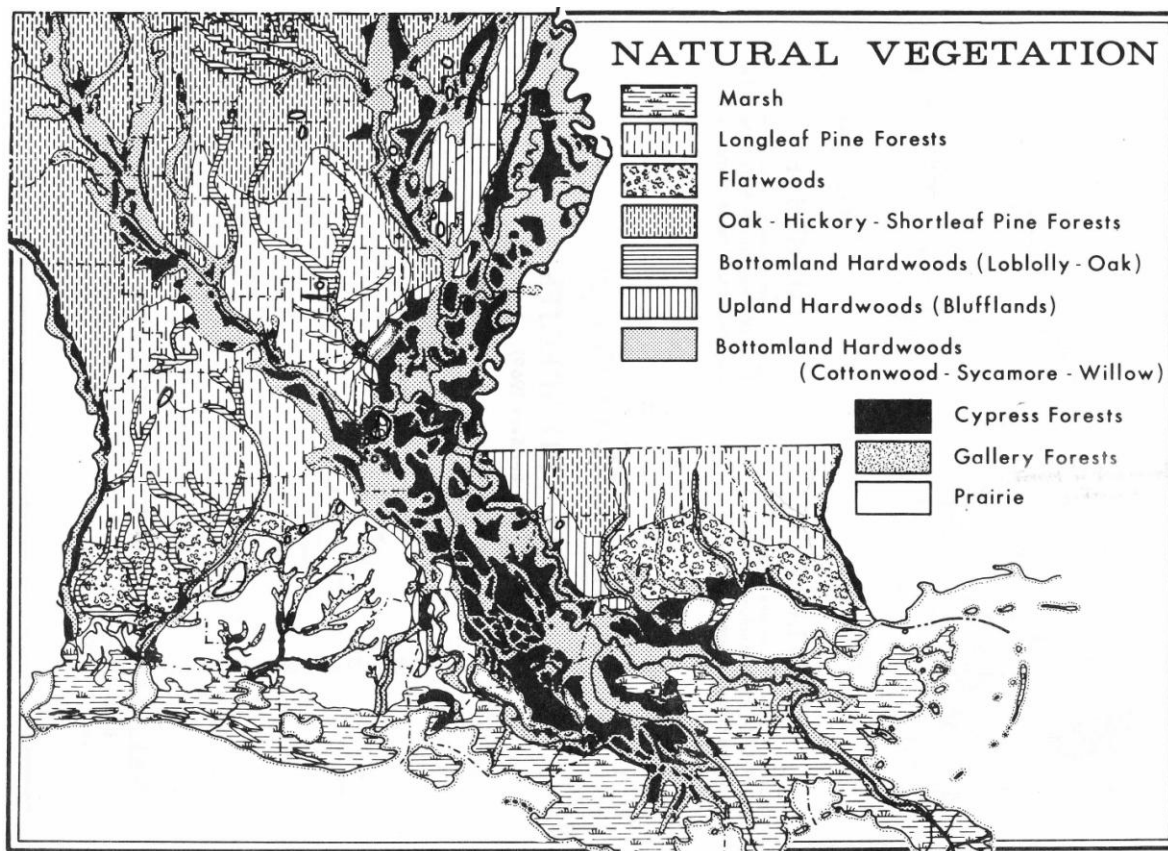


Figure 3.1. Primary natural vegetation types and presettlement distribution in Louisiana (Newton 1972).