

Crayfishes of the Big Thicket National Preserve

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Cambarellus puer



Cambarus ludovicianus



Fallicambarus fodiens



Fallicambarus kountzae



Orconectes lancifer



Orconectes texanus

Introduction:

Big Thicket National Preserve (BTNP) is found North East of Houston, Texas. The Big Thicket is a large park surveyed at 112,250 acres (slightly larger than Ohio county in the northern panhandle of West Virginia). This area retains numerous species, and has been described as the biological crossroads of North America. The high biodiversity of the area is due to the convergence of many ecosystems within a relatively small area. The status and makeup of plant, bird, mammal, and reptile communities of the area are well understood. However, until now, a complete and intensive survey aimed at uncovering the Big Thicket's crayfish diversity has never been completed.

Objectives:

- (I.) Investigate the crayfish diversity of the Big Thicket Nature Preserve
- (II.) Create species checklist to be used in association with the *Thicket of Diversity* All Taxa Biotic Inventory project supported by the BTNP

Methods:

- 100 sites were sampled across all 14 BTNP units
- Site selection randomized within each BTNP unit
- Crayfish populations were sampled using dip nets, hand collection and burrow excavation
- Collected crayfish were vouchered and preserved using 70% ETOH and assessed into the WLU Astacology Collection



Procambarus acutus



Procambarus clarkii



Procambarus depratzii

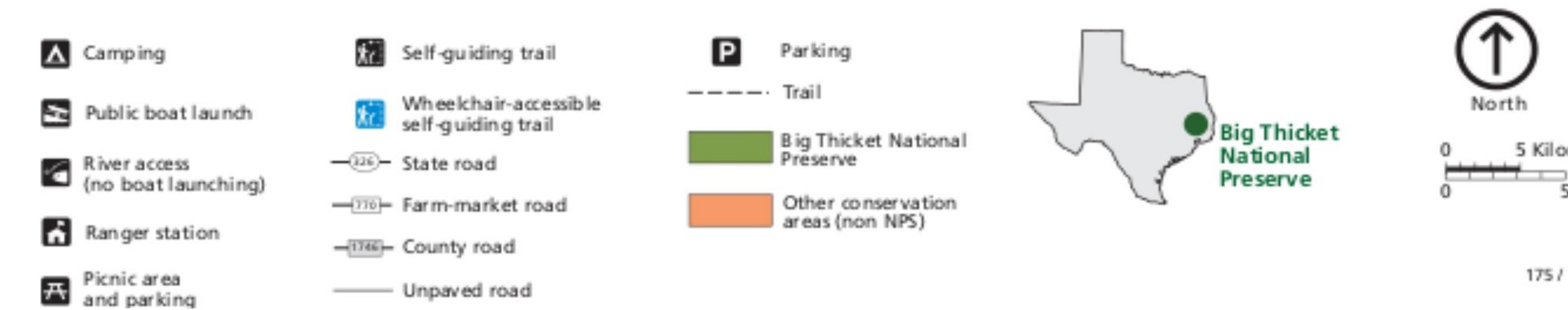
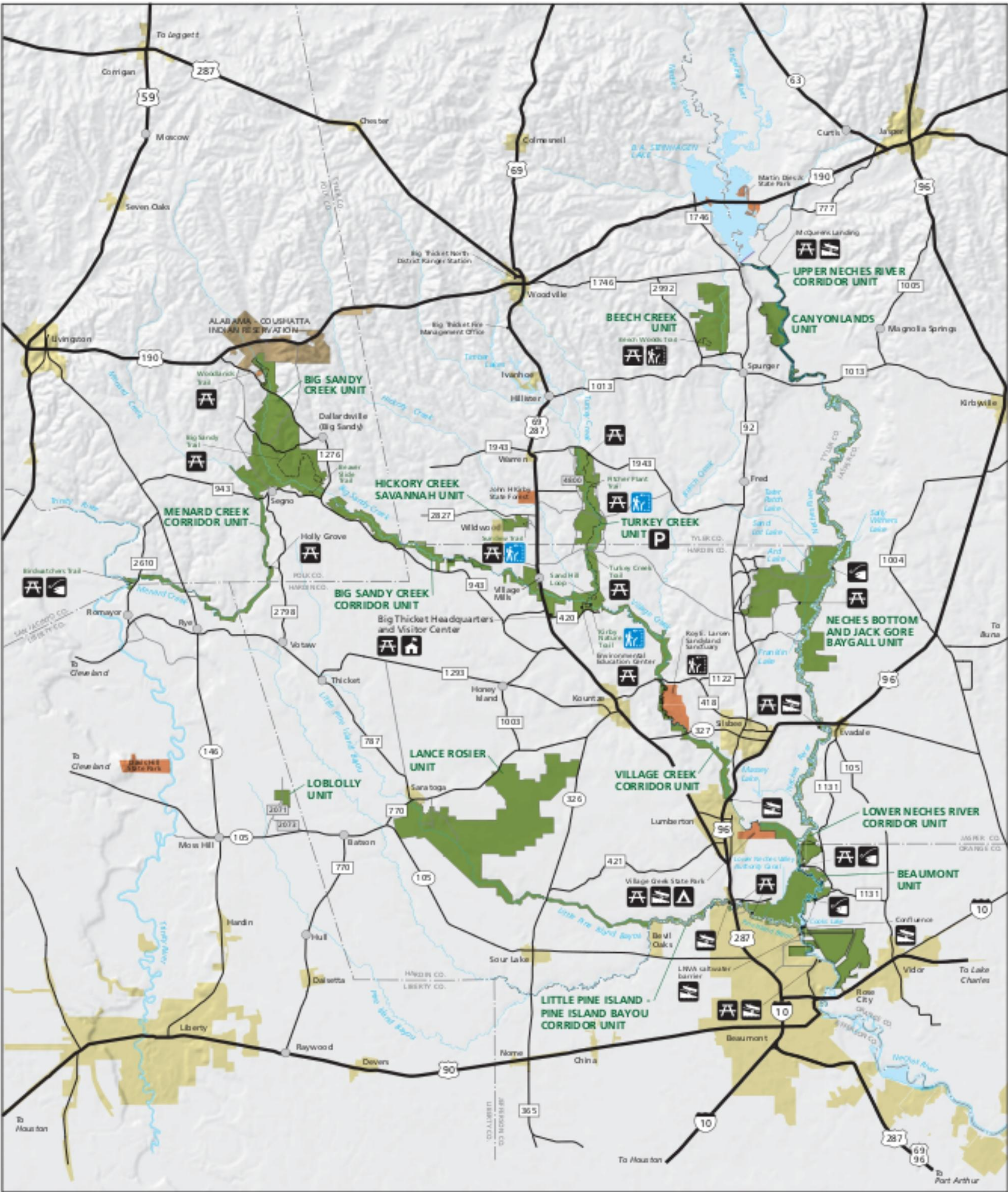


Procambarus kensleyi



Procambarus zonangulus

Big Thicket National Preserve Texas



Results - Species Checklist

<i>Cambarellus puer</i> Tertiary burrower	<i>Procambarus acutus</i> Secondary burrower
<i>Cambarus ludovicianus</i> Primary burrower	<i>Procambarus clarkii</i> Secondary burrower
<i>Fallicambarus fodiens</i> Primary burrower	<i>Procambarus depratzii</i> Secondary burrower
<i>Fallicambarus kountzae</i> Primary burrower	<i>Procambarus kensleyi</i> Primary burrower
<i>Orconectes lancifer</i> Tertiary burrower	<i>Procambarus zonangulus</i> Secondary burrower
<i>Orconectes texanus</i> Tertiary burrower	

	<i>Ca. puer</i>	<i>C. ludovicianus</i>	<i>F. fodiens</i>	<i>F. kountzae</i>	<i>O. lancifer</i>	<i>O. texanus</i>	<i>P. acutus</i>	<i>P. clarkii</i>	<i>P. depratzii</i>	<i>P. kensleyi</i>	<i>P. zonangulus</i>
Beaumont	X	X					X	X			
Beech Creek		X						X	X	X	
Canyon Lands	X						X	X	X	X	
Big Sandy Creek		X							X		
Hickory Creek Savannah	X	X									
Jack Gore Baygall	X	X	X				X	X	X	X	X
Lance Rosier	X	X	X	X	X		X	X	X		
Lower Neches River Corridor	X	X	X		X	X	X	X			X
Mennard Creek		X					X	X			
Neches Bottom	X	X	X			X	X	X			X
Turkey Creek	X	X	X	X			X	X		X	
Upper Neches River Corridor		X	X			X	X	X			
Little Pine Island Bayou											
Loblolly											

Conclusions

Big Thicket National Preserve maintains a highly diverse crayfish fauna, with an particularly diverse assemblage of burrowing crayfish species. In total, the preserve maintains 5 genera and 11 species within small land area