

THE NATIVE LANGUAGES OF THE SOUTHEASTERN UNITED STATES

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The Southeast as a Cultural and Linguistic Area

The Southeastern region of the United States is an area within which the aboriginal cultures and languages were quite similar to one another, as opposed to cultures and languages which lay outside the area. Within such a "culture area", languages and cultures have developed along similar lines due to shared circumstances and intergroup contact, and it is possible to make general statements which apply to all of the native groups, as opposed to groups which lie outside the area. Other such "culture areas" of North America include the Pacific Northwest and the Southwest (Kroeber 1939).

The core of the Southeast culture area (Kroeber 1939:61-67, Swanton 1928) is the region that stretches from the Mississippi River east to the Atlantic, from the Gulf Coast to the border between Kentucky and Tennessee (or North Carolina and Virginia). The periphery of the Southeast includes territory as much as 200 miles west of the Mississippi (into Arkansas, Oklahoma, and East Texas), and as far north as the Ohio and Potomac rivers (including Kentucky, West Virginia and Virginia).

In archaeological terms (Willey 1966:246 ff), the Southeast is part of the Eastern Woodlands area, which includes most of North America east of the Great Plains. This area is (or was) generally wooded, with mixed oak-pine woods predominating in the Southeast. Soils are reasonably good, and rivers and streams abound. The climate is temperate, even subtropical in its southern extremes (e.g., south Florida).

The Eastern Woodlands experienced some four major cultural traditions before European contact: Big-Game Hunting, the Archaic, the Woodland, and the

Mississippian cultural traditions. Big Game hunting prevailed at the time of the earliest known human remains, and involved a dependence on Pleistocene mega-fauna (mammoths, etc.), as its name implies. In the early post-Pleistocene (after about 8000 BC), with the extinction of the mega-fauna, economies shifted to greater reliance on small game and increased utilization of wild plant foods (the Archaic tradition). About 1000 BC, the appearance of pottery and ceramic figurines, mortuary mounds and other earthworks, and especially plant cultivation (including maize) marks the transition to the Woodlands cultural tradition. Finally, around 500 AD, maize agriculture intensified large permanent towns were established, and the construction of organized complexes of large mounds around plazas—along with new vessel forms and decorations—marks the onset of the Mississippian culture. This tradition originated along the central and lower Mississippi River Valley (hence its name), and spread out from there over the next 1000 years, so that by 1400 AD centers of Mississippian culture were found throughout the Eastern Woodlands.

Not all of these cultural traditions were manifested in exactly the same way across the entire region, and at a given time neighboring societies might be practicing different traditions. One population might already have adopted Mississippian culture, but its neighbors had not. Since the cultural traditions do not define strict chronological periods, archaeologists prefer to use a distinct set of terms for the chronology of the region (Willey 1966):

Paleo-Indian (before 8000 BC), Big-Game Hunting;

Archaic Period (8000-1000 BC):

Early (8000-5000 BC), transition to Archaic culture;

Middle (5000-2000 BC), only Archaic culture;

Late (2000-1000 BC), only Archaic culture;

Burial Mound Period (1000 BC-AD 700):

Burial Mound I (1000-300 BC), transition to Woodland culture;

Burial Mound II (300 BC-AD 700), Woodland culture except in marginal

areas;

Temple Mound Period (AD 700-AD 1700):

Temple Mound I (AD 700-1200), transition to Mississippian culture;

Temple Mound II (AD 1200-1700), Mississippian except in marginal areas.

The last of these archaeological stages, Temple Mound II, includes the period of early European contact, which begins in the Southeast in the first half of the sixteenth century with the expeditions of Ponce de Leon (1513), Narváez (1528), and Hernando de Soto (1539-1542). By 1700, the native societies of Florida and the Gulf Coast had been transformed by contact with the Spanish and the French, and English colonization had disrupted much of the rest of the Southeast. Some of the Europeans who visited Indian societies during this contact period left detailed accounts of Indian cultures (e.g., Le Page du Pratz published an eye-witness account of a Natchez funeral in 1758; du Pratz 1956). However, the rapid spread of Old World diseases—even ahead of the visitors—had altered many societies well before they were observed by Europeans, and even the earliest reports apparently do not do justice to the nature of aboriginal society.

Millennia of shared cultural development had resulted in fairly uniform culture across the Southeast by 1700 (except that there was a distinction between the culture of Mississippian towns and isolated rural populations that still followed Woodlands ways). There was no corresponding linguistic convergence. The known populations of the Southeast spoke languages of at least six distinct language families, as different from each other in their structures as English and Chinese. The core of the Southeast was occupied by speakers of the Muskogean languages, but other languages were spoken around the periphery and along major trade routes. The language families reported are the following (Crawford 1975:5-6; locations given here are grossly simplified):

Algonquian Family

- Pamlico (northern Virginia)
- Powhattan (Tidewater Virginia)
- Shawnee (Kentucky and Tennessee)

Caddoan Family

- Caddo (Oklahoma, Arkansas, and East Texas)

Iroquoian Family

- Cherokee (western North Carolina)
- Nottoway (southeastern Virginia)
- Tuscarora (North Carolina)

Muskogean Family

- Alabama (central Alabama)
- Apalachee (Tallahassee area)
- Chickasaw (northern Mississippi, western Tennessee)
- Choctaw (central Mississippi)
- Creek (central Alabama and Georgia)
- Hitchiti (central Georgia)
- Koasati (northern Alabama)
- Mikasuki (southern Georgia)
- Seminole (central Georgia)

Siouan Family

- Biloxi (Gulf Coast Mississippi)
- Catawba (South Carolina)
- Ofo (western Mississippi)
- Quapaw (eastern Arkansas)
- Tutelo (western Virginia)
- Woccon (tidewater North Carolina)

Unclassified Languages

- Atakapa (Texas-Louisiana coasts)
- Chitimacha (Mississippi delta, Louisiana)
- Natchez (western Tennessee)
- Tunica (northwestern Mississippi)
- Yuchi (Georgia-North Carolina border)

Languages spoken in adjacent areas could be very different from one another, to the point of mutual unintelligibility, and it is surely the case that many dozens of languages

died out before they were reported. To compensate for this great diversity in languages, there were several widely used trade languages, spoken as a second (or third) language by many people. The most famous of these is Mobilian (or Mobilian Jargon), a trade language based on Choctaw-Chickasaw, used up the Mississippi River and across the Gulf Coast as the language of commerce and travel. In the inland Southeast, Creek was the language preferred for the same purposes, and speakers of other Muskogean languages were likely to be bilingual in Creek. Around the Chesapeake Bay, other trade languages probably existed; Jersey and Delaware jargons developed to deal with the incoming Europeans, and something similar may have been used before contact.

Despite their gross differences, the languages of the Southeast share many characteristics which lead linguists to treat the area as a "linguistic area," analogous to a "culture area" (Campbell 1997:341-344), and similar in nature to other linguistic areas, such as Mesoamerica, or the Indian subcontinent. Some of the features that define this area are phonological, having to do with the pronunciation of the languages. Some are grammatical (verb conjugations, etc.) and some are lexical (similar vocabularies and patterns of word formation). In any case, the defining features of the area are common to most of the languages within the area, and rare elsewhere in North America.

In phonology, bilabial and labiodental fricatives ([ɸ] and [ɸ]), and the lateral spirant or "voiceless l" ([ɬ]) are characteristic Southeastern markers of speech. In grammar, "classificatory" verbs abound; a verb like 'to lie down', for instance, would have many distinct forms, one used for long, stick-like objects, another for round objects, another for flat sheet-like objects, and so on. Nouns are divided between those that are inalienably possessed (like body parts) and those that are not, and the inflection of these nouns for possession has parallels in verb conjugations that distinguish between degrees of "control" by the subject over the action. Some of these features are reported from other North American Indian languages, but the predominance of their presence and the specific ways they are manifested in the languages is typically Southeastern. Linguists have been able to pinpoint the areas of origin of some of these features, and treat their widespread occurrence across the area as the result of diffusion, the result of borrowing of language patterns, a process similar to the development of shared culture that is seen in the archaeological and ethnographic evidence.

In summary, the Southeast is an area of rather similar geography that has been occupied for a long time by societies that have developed along the same lines, in direct or indirect contact with one another. These societies speak a large number of languages that were originally much less like each other than they are now. In both language and culture, then, it is proper to treat the Southeast as a distinct area, within which societies all share a large number of traits that collectively distinguish them from the societies of other areas.

The Native Languages of the Southeast

The core and near peripheries of the Southeastern culture area were occupied by speakers of four large language families and two geographically contiguous groups of similar languages whose genetic relationship has not been demonstrated. Most of the Southeast (almost all of Mississippi, Alabama, Georgia, and north Florida) was home to the Muskogean family. Around the borders of Muskogean, clockwise from southwest to southeast, there were speakers of the "Gulf" languages, the Caddoan, Siouan, and Iroquoian language families, and the little-known languages of South Florida.

Muskogean Languages

The Muskogean family of languages fared much better than many other indigenous language families, due to relative isolation and buffering from direct early contact with Europeans. There probably were more Muskogean languages than we know about, but of the ones we have any data from, only Apalachee is extinct, and there are at least a couple of hundred speakers of each of the surviving languages. A number of other languages are known in name only but are thought to have been Muskogean (Abihka, Tukabahchee, Tuskegee are mentioned by Crawford 1975). Some other names may refer to Muskogean languages, but scholars have serious doubts. Two such languages, Guale and Yamasee, were located along the eastern fringe of Muskogean, along the Georgia-South Carolina Atlantic coast. Several words thought to be from these languages were recorded by German-speaking immigrants to Georgia: Protestants from Salzburg (who used Greek letters to record the words because they represented the sounds better; Broadwell 1991). However, it has been demonstrated by Sturtevant (1994) that these words are actually Creek, not Yamasee or Guale; a community of Creeks had moved in to replace the Yamasees, who left for Spanish Florida after the Yamasee War of 1715-1717.

There are nine languages about which enough is known to be able to classify them as members of this language family. It is clear that some of these languages are more closely related to each other than others. Choctaw and Chickasaw are said to be mutually intelligible, and are taken to be dialects of the same language, with the difference between them being political rather than linguistic. Hitchiti and Mikasuki are the same language at different times; Creek and Seminole are terms for kinds of Muskogee. Apalachee, Koasati and Alabama are different but closely related languages and some scholars believe Alabama and Koasati were still mutually intelligible in the 16th century.

Thus, the family as it is known consists of four clusters of dialects/languages. From west to east, these are:

- Choctaw-Chickasaw
- Alabama, Koasati and Apalachee
- Hitchiti-Mikasuki
- Creek-Seminole (Muskogee)

How these groups are related to each other is still a matter of scholarly debate. Haas (1941) divided the family into a Western and an Eastern Muskogean. Western Muskogean included only Choctaw-Chickasaw; Eastern was divided into three coordinate branches (as listed above). Pamela Munro (1987) argued that Muskogean broke into Southern vs. Northern, with Creek and Seminole in the Northern branch. The Southern branch then broke into Hitchiti-Mikasuki versus the rest; the rest (Southwestern) then divided into Alabama-Koasati-Apalachee and Western (Choctaw-Chickasaw). Karen Booker (1993) returned to a model resembling that of Haas, but Booker's Eastern Muskogean broke into Creek-Seminole versus the rest, and then into Alabama-Koasati-Apalachee versus Hitchiti-Mikasuki. These models are represented in Figure 1.

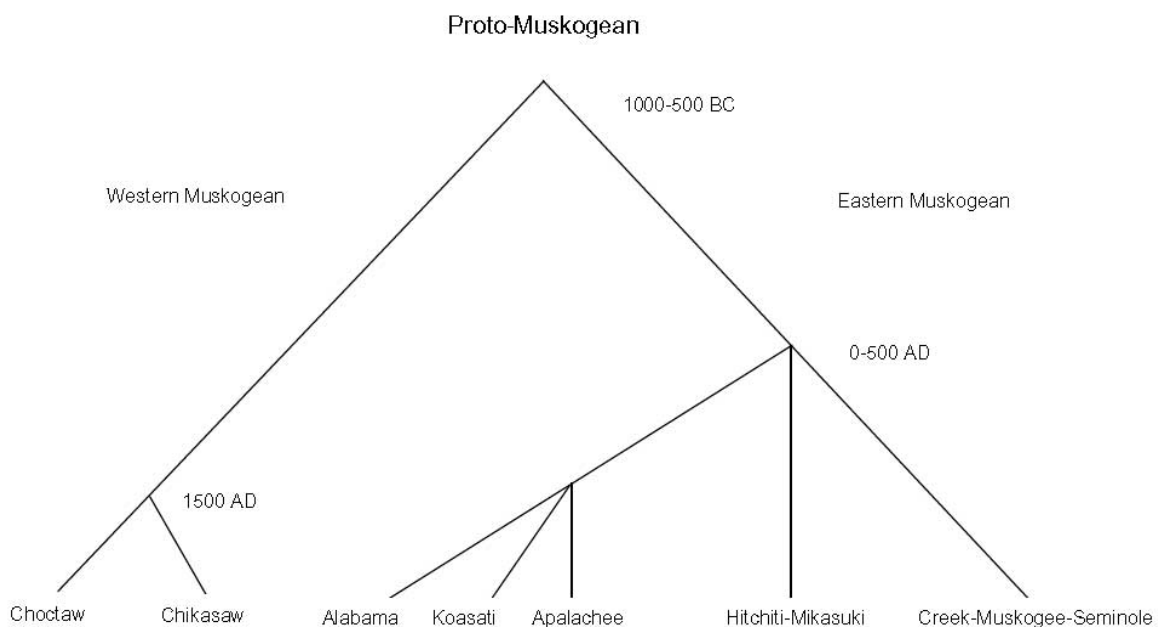


Figure 1. The Haas (1941) Model of Muskogean Diversification, with Chronology from Broadwell (1992).

Another way of looking at this is that there are no strong subgroups beyond the four everyone accepts, i.e., there are no special relationships between the four subgroups. Nicklas (1994:15-16, cited in Campbell 1997:148) notes that:

"The entire Muskogean area has the appearance of a former continuous dialect area, with isoglosses running in several directions, which has been broken up into discrete languages by the loss of intermediate dialects. It has been argued that there are two extreme types, Choctaw to the west and Creek to the east, with the other languages in the middle being influenced now from the east, now from the west."

Haas (1941) and earlier scholars proposed some wider relationships of Muskogean, but these have not been widely accepted except as regional diffusion spheres of the sort we would expect in a linguistic/cultural area, where languages come to resemble each other more and more over time, even though they were originally unrelated. Proposals for such wider groupings usually include Tunica and Natchez, and sometimes Atakapa and Chitimacha as well. Beyond these regional groupings, Haas considered the possibility that these "Gulf" languages were more distantly related to Wiyot and Yurok, two languages of northern California, and that Algonkian might tie into the latter. Except for the connection of Wiyot, Yurok, and Algonkian to each other, most linguists remain unconvinced of these wider relationships.

Choctaw and Chickasaw

De Soto encountered the Choctaw in southeastern Mississippi (Swanton 1968:180-185), from which area they controlled the adjoining parts of southern Alabama. Choctaw towns were located throughout central and southern Mississippi and southeastern Louisiana. They were the most numerous tribe in the Southeast after the Cherokee (estimates run up to 16,000). They had extensive relations with the French after the latter settled Louisiana, and the Choctaw served as a buffer between the French and the English to the east and north. They had very little involvement in the Red Stick War (1813-14), and in general kept up friendly relations with the United States after Independence. After US Independence, however, increased American settlement forced the Choctaw to remove to Oklahoma in 1831-33. Many Choctaw remained in the Southeast, and small Choctaw groups survived in Louisiana and Mississippi, and have now begun to recover (Peterson 1992).

There were a number of Choctaw dialects, perhaps including Houma, which was either a Choctaw dialect or a closely related Muskogean language. Swanton (1968:180-181) notes that various authors speak of as many as three divisions (S, W, SE), but that there is very little hard linguistic evidence to support this assertion. Crawford (1975, 1978) notes that the question is greatly complicated by the fact that there was a widespread trade language, Mobilian, that was largely based on Choctaw, and that speakers of a number of different languages could have been identified as Choctaws because they gave investigators Mobilian words (and investigators took those words to be Choctaw).

The 1990 US census reported about 10,000 speakers of Choctaw, and quite a bit of scholarship has been devoted to the language. It is relatively well documented, although there is still no definitive dictionary or grammar. Peterson (1992) gives a good picture of the Mississippi Choctaw in modern times. They are economically stable, and the language is spoken by most adults and children, so it is not near extinction.

The Chickasaw were contacted by the de Soto expedition in 1540 in a village named Ch'caza (Swanton 1968:177), located in northeastern Mississippi near modern Tupelo, and most of their villages were located in this area throughout the 1700s. They claimed the territory west to the Mississippi River, territory to the north as far as the junction of the Tennessee and Ohio Rivers, and areas south and southwest (basically to a border

with Choctaws). From the beginning of the 18th century they were allies of the English, and were noted for their role as warriors against the French (who were allied with the Choctaw). Some Chickasaws moved east to live with the Creeks, and there was a settlement as far east as the Savannah River in South Carolina. The Treaty of Hopewell (1786) fixed the US-Chickasaw border at the Ohio River, but this border was quickly violated, and by 1832 the Chickasaw had to give up all their lands east of the Mississippi river, removing themselves to Oklahoma between 1837-1847.

Few, if any, Chickasaws are left in their original homeland, but the Oklahoma tribe is alive and well, although there are not many people who actually speak the language. The 1990 US census reported about 1000 speakers. Nonetheless, one of the best dictionaries of a Muskogean language has recently been published (Munro and Willmond 1994), and the language is well documented, largely through the work of Pamela Munro.

In sum, the Western branch of Muskogean (Choctaw-Chickasaw) consists of two dialects of the same language, separated largely by post-Contact alliances with French (Choctaw) versus English (Chickasaw) allies. Before contact with Europeans, this Western Muskogean language was very influential along the Mississippi river and Gulf Coast trade routes, and Western Muskogean (especially the Choctaw dialect) is the major contributor to Mobilian jargon, the indigenous trade language used for riverine and coastal trade (Drechsel 1996, 1997).

The rest of Muskogean as we know it is divided into three subdivisions: Alabama-Koasati-Apalachee, Hitchiti-Mikasuki, and Muskogee-Creek-Seminole. The first set consists of three coordinate languages, which may still have been mutually intelligible in the sixteenth century, that is, they may have been like Choctaw and Chickasaw, dialects of the same language which became politically separated through different Colonial histories and alliances. The other two sets of names also represent single languages attested at various points and places through time.

Alabama-Koasati-Apalachee

Alabama was first reported just north of present-day Montgomery (AL), near the junction of the Coosa and Tallapoosa Rivers, but they may have moved there from an earlier location in northern Mississippi, northwest of the Chickasaw, according to a remark in de Soto's chronicles. When the French established themselves at Mobile Bay in 1702, the Alabama allied with the English and engaged the French in a war that lasted until 1712. The French then established a fort at the Coosa-Tallapoosa junction to hold the Alabama in check, and began friendly relations with them. France ceded the area to England in 1763, and the Alabama broke up, some moving to Louisiana, up the Mississippi from New Orleans. In 1784 they moved further into Louisiana, some to Calcasieu Parish (Lake Charles), some to the upper Red River, near the Caddo, and some to central Louisiana, near Opelousas. Eventually, most moved on to eastern Texas, and in 1854 the Texas legislature granted the Alabama a reservation, where they were joined by some of the Koasati. The Alabama that didn't move to Louisiana in

1763 either assimilated or were moved to Oklahoma with the Creek Nation, where they still kept a square ground in 1928 (Swanton, cited by Crawford 1975:29).

An extensive dictionary of the Alabama language (Sylestine *et al.* 1993) is based on work in the Alabama-Coushatta reservation in east Texas. According to the 1990 US Census, Alabama has about 250 speakers (out of an ethnic group of 500-600) on the reservation in Texas. No speakers are left in Oklahoma.

Koasati (Coushatta) was spoken to the north of Alabama. De Soto reported the tribe in northeastern Alabama, on the Tennessee River. By 1686 some Koasati had moved next to the Alabama at the junction of the Coosa and Tallapoosa Rivers, near Montgomery. From this point they went through more or less the same transformations as the Alabama. Many moved to the Red River area in Louisiana between 1793 and 1795; others stayed in Alabama and were absorbed by the Creeks. Some of the Louisiana Koasati remained in Louisiana, where they are known as Coushatta; others moved to Texas, some as early as 1820, while Texas was still Mexican territory. They ultimately joined the Alabama on the Alabama-Coushatta reservation in eastern Texas. There, Koasati is said to have become the dominant language of the reservation.

Koasati is no longer spoken in Oklahoma; there are almost 300 speakers in Louisiana, but fewer than 100 in Texas. In the Louisiana community, more people are bilingual in Koasati and Creole French than in Koasati and English. A modern grammar and dictionary (Kimball 1991, 1994) provide good documentation of the language.

Apalachee was the Muskogean language spoken along the Gulf Coast from Pensacola Bay to the Aucilla River (30 miles east of Tallahassee, FL). Both Narváez (1528) and de Soto (1539) visited the Apalachee, and de Soto spent the winter with them. They resisted Spanish control, but were subdued by 1600 and were completely Christianized during the next fifty years. During the winter of 1703-04, a South Carolina (English) force attacked the Apalachee, killed hundreds, and took over 1000 prisoners back to South Carolina. Some survivors made their way to Mobile Bay and sheltered with the French; some of the prisoners made their way back from South Carolina and settled at Pensacola. Both bands moved west after the English took control of the Gulf Coast. By 1764 they were settled along the Red River in Louisiana with a couple of minor tribes (Taensa and Pakana). In 1815 some Apalachee were reported on Bayou Rapides (Alexandria), where there is still a small population that identifies itself as Apalachee. Others either died out, assimilated to other tribes, or went west with the Creeks when they were resettled in Oklahoma.

All that is known about the Apalachee language is based on a single letter written in Apalachee and Spanish in 1688, addressed to Charles II of Spain, although there are reports of documents in the archives of Havana, Cuba. Fortunately for scholarship, the letter is of sufficient length to provide a wealth of information to someone who knows other Muskogean languages. Geoffrey Kimball, compiler of the Koasati dictionary (Kimball 1994), has published a grammar sketch, a vocabulary of about 175 words (including some Spanish loans), and a retranscription of the letter (Kimball 1987, 1988). The data are good enough to allow Apalachee not only to be placed in the Muskogean family, but to be identified as a close relative of Alabama and Koasati.

Hitchiti-Mikasuki

The Hitchiti were probably the most important tribe in the southern half of Georgia, and several language names may refer to dialects of the Hitchiti language: Apalachicola, Sawokli, Okmulgee, and Oconee. The Hitchiti probably appear in de Soto's narrative as the Ocute or Ocuti, located on the lower Ocmulgee River in Georgia. There are few mentions in historical records, but they occasionally show up with Lower Creek diplomatic missions. They were moved with the Creeks to Oklahoma, but some Hitchiti returned to Florida, settling in the northern part of Seminole territory, probably in the town of Miccosukee, northeast of Tallahassee. As early as 1799 there is mention of Mikasuki (apparently the same as Miccosukee) as one of the "Seminole" towns along the Gulf of Mexico (Benjamin Hawkins 1848). This population was devastated by Andrew Jackson's troops in the First Seminole War (1817-18) and again, some having fled to the Alachua area, in the Second Seminole War (1835-42). The remnants were also involved in the Third Seminole War (1858-59), and finally were left alone with the Seminoles. In fact, the language spoken by most ethnic Seminoles is Mikasuki.

There are vocabularies collected in the 19th century that are called "Hitchiti," and there are materials that are called "Mikasuki." Scholars agree that Hitchiti and Mikasuki are closely related, and they are at most dialects of the same language, called by different names as the ethnic group took on new identities in its movements. Mikasuki is reported by the 1990 US Census to have about 500 speakers in Florida, with a few monolinguals and numerous child speakers (in communities other than Hollywood).

Muskogee-Creek-Seminole

The final set of Eastern Muskogean languages is formed by the language(s) called Muskogee, Creek, and Seminole. The use of the term "Muskogee" may be recent, and the term is not found widely in historical sources. Swanton (1952) suggests the word may be Shawnee in origin, and mean something like "swampy ground." In any case, the tribe was most often referred to as "Creek," short for "Ochesee Creek Indians," after an early name for the Okmulgee River in Georgia, along which some of them lived (Sturtevant 1971). In 1540, de Soto passed through some of their settlements, as did later Spanish explorers. They were known by English settlers from about 1695, when they had towns "all the way from the Atlantic coast of Georgia and the neighborhood of Savannah River to central Alabama" (Swanton 1952:161). By the time South Carolina was settled, the confederacy known as the Creek Confederacy was already functioning, and the Creeks were major players in Southeastern affairs. Their language was apparently used as a trade language in the inland Southeast, away from the Gulf Coast, where Mobilian was the trade language.

The Creeks were divided geographically into two parts, the Upper Creeks, on the Coosa and Tallapoosa Rivers, versus the Lower Creeks, on the lower Chattahoochee and Ocmulgee Rivers. To make matters more confusing, the Upper Creeks were at times

divided into the Coosa or Abihka (Upper) and the Tallapoosa (Middle) Creeks, and some authors (e.g., Bartram, according to Swanton) totally confuse the whole matter.

The Creeks became important in part because from their protected inland location they were relatively safe. In the 18th century, Alexander McGillivray, the son of a Scotch trader, reorganized the Confederacy and was especially effective in playing the Europeans off against one another. After his death, pro- and anti-European factions opposed each other, and when the Shawnee prophet Tecumseh inspired the Upper Creeks to take up arms against the Europeans in the Red Stick War (1813-14), most of the Lower Creeks went the other way. Following their defeat, Creeks moved into Florida, recently vacated by the Spanish, and ultimately fought three wars with the American forces, ending up in the swamps of southern Florida. In this process, some of the Creeks became known as "Seminoles," a name based on the Spanish term cimarron, "untamed," perhaps in contrast to the Yamasee, whose name means "tamed" in Creek. Sturtevant (1971) has traced the ethnogenesis of the Seminole in detail.

Most of the Oklahoma Seminoles apparently speak Creek, but most of the Florida Seminoles speak Mikasuki. The 1990 US Census reported over 6000 speakers of Creek/Seminole/Mikasuki in Oklahoma, southern Alabama and Florida (out of 20,000 ethnic Seminoles). Most of these speakers are adults. The Loughridge and Hoge dictionary (1914) was the most extensive listing of Creek vocabulary until recently, but has now been surpassed by a new compilation (Martin and Mauldin 2000).

Algonquian, Iroquoian, and Siouan Languages

Surrounding the Muskogean languages are languages of a number of other language families. Along the western fringe, in the Mississippi Valley region, are a number of unclassified languages (see below). Up the Mississippi, from Louisiana to Illinois, are Siouan languages, principally Quapaw. In the lower Ohio River valley, Algonquian languages, principally Shawnee, border Muskogean. West of the Appalachians, Yuchi (unclassified) and Cherokee, an Iroquoian language, border Muskogean, and east of the mountains, Catawba (another Siouan language) forms the border.

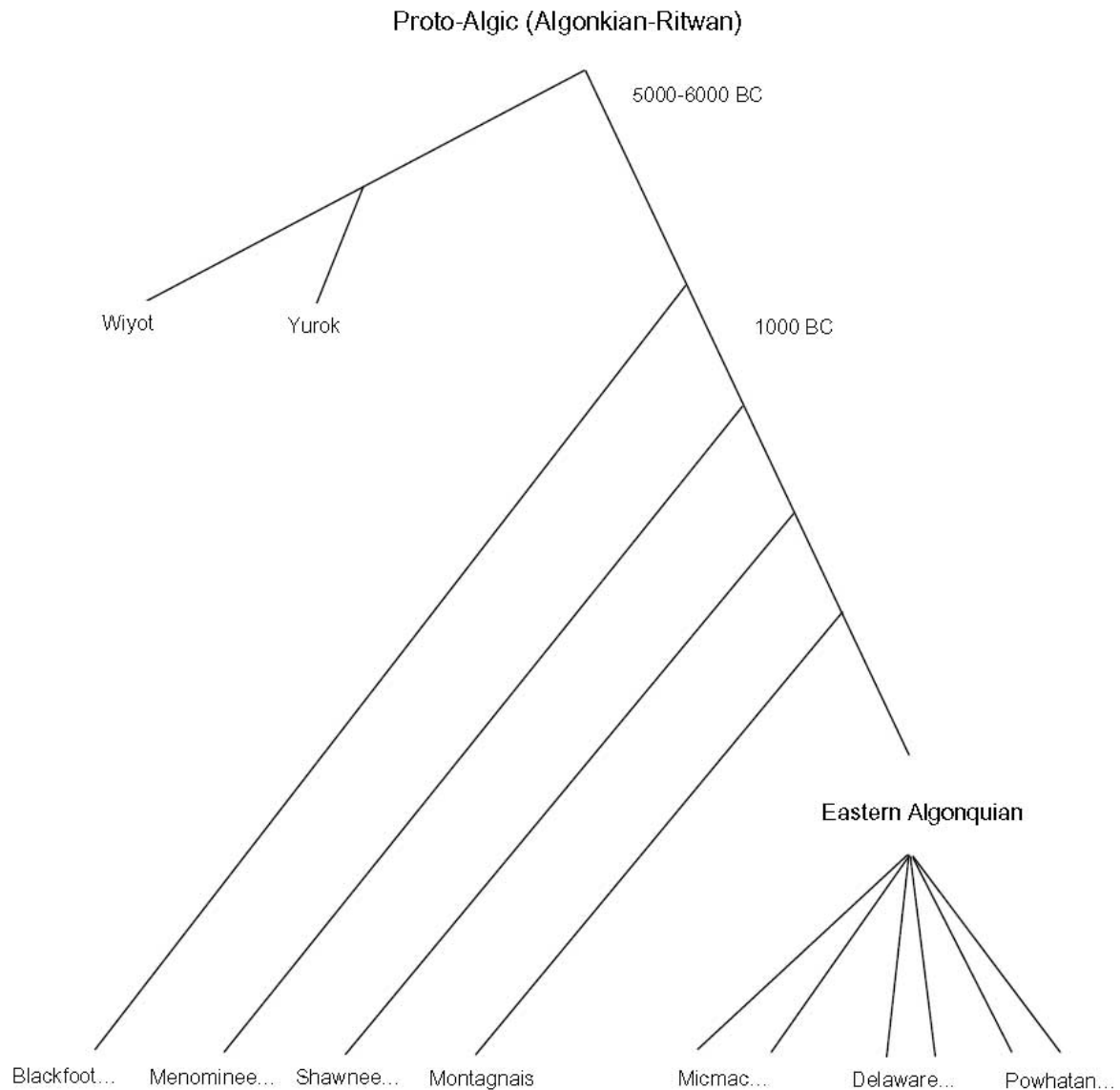


Figure 2. Algic Languages (Algonkian-Ritwan).

Algonquian

What is called Algonquian (or Algonkian) is just one piece of a larger language family called Algonquian-Ritwan, or "Algic" (Figure 2). Ritwan consists of Wiyot and Yurok, two languages spoken along the coast of northern California. Algonquian includes some three dozen languages, distributed along both sides of the US-Canadian border, from the Rocky Mountains to the Atlantic seaboard.

Linguists who have studied this family note that the Algic languages (and therefore Proto-Algic, the ancestor of the family) have a lot in common with languages of the Salish language family, a family whose languages are spoken around Puget Sound and

the states of Washington and Oregon, along the Columbia River. It therefore appears that the distant ancestors of the Algonkian peoples lived in the Northwest, perhaps along the middle Columbia River, and were in close association with the ancestors of the Salishan peoples. However, the location of the early Salish languages is in question, since it has been suggested that they moved into coastal locations just prior to historic times (Boas 1905:96-97, Jacobs 1936, cited in Kinkade 1999:372).

From their previous location, it appears that one branch of the family moved south to northern California (ultimately becoming the Ritwan languages, Wiyot and Yurok). The Algonkian branch appears to have a homeland in the area between and to the northeast of the Great Lakes (Siebert 1967). From this area the languages appear to have spread out in all directions. One branch ultimately spread out across the upper Great Plains, becoming the prototypical horse-borne buffalo hunters of the American West. Linguists have noted that Algonquian forms a west-to-east cline, with the western languages more conservative and the eastern languages more innovating (Goddard 1994). This might suggest a west-to-east migration, but the expansion of Algonquian onto the Great Plains is known to be late. Moving generally from west to east, the sequence of Algonquian languages is:

- Blackfoot
- Cheyenne
- Arapaho (Arapaho, Atsina, etc.)
- Menominee
- Ojibwa-Potawotami
- Fox (Fox, Sauk, Kickapoo, Mascouten)
- Miami-Illinois
- Shawnee
- Cree-Montagnais
- Eastern Algonquian

"Eastern Algonquian" is itself another similar chain of languages that stretches from Nova Scotia down the Atlantic Coast to North Carolina. From north to south, these languages are:

Micmac	Nova Scotia
Maliseet-Passamaquoddy	Maine, New Brunswick
Abenaki-Penobscot	Quebec, New England
Etchemin	Maine
Loup B	New England
Massachusett	Massachusetts
Narragansett	Massachusetts/Connecticut
Delaware	Delaware-New York State
Nanticoke-Conoy	Maryland/Delaware (Upper Chesapeake)
Powhatan	Virginia (Lower Chesapeake)
Christanna Algonquian	Virginia, North Carolina

Very few of these languages have anything to do with the Southeast culture area, other than Shawnee, which is Muskogean's northern neighbor along the lower Ohio River and in northern Tennessee. The Shawnee were first reported by French explorers along the Cumberland River in northern Tennessee (near Knoxville), but their traditions and language relations indicate they had recently migrated there from further north. They immediately inserted themselves into history by dividing into numerous small groups that showed up from Georgia to Pennsylvania, in varying alliances or conflicts with French, English and American colonists, and with Cherokees, Chickasaws and Creeks, including most notably the role played by Tecumseh in the Red Stick War. Shawnee currently has about 234 speakers, living in Oklahoma with another 2000 or so members of the tribe; only older adults speak the language.

Iroquoian

Iroquoian (Figure 3) is a language family with a distribution that lies mostly north of the Southeastern culture area. It is divided into two branches, Northern and Southern Iroquoian, with Cherokee being the only language in the Southern branch and the language that most concerns us here.

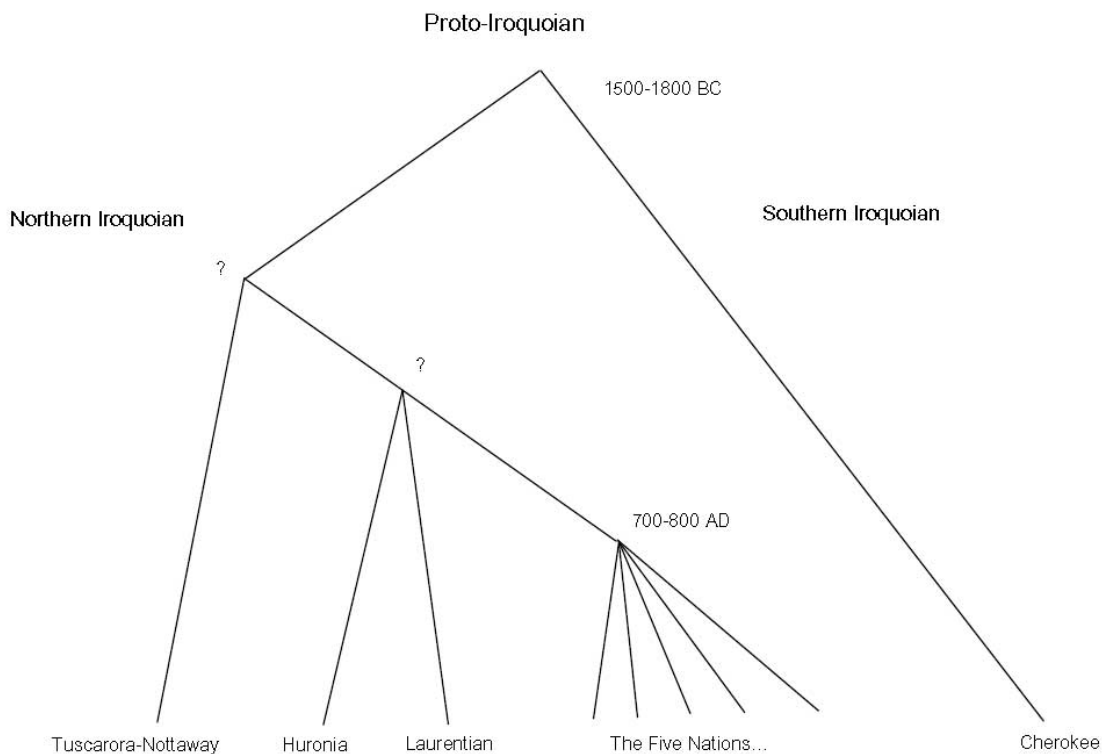


Figure 3. The Diversification of Iroquoian Languages (Lounsbury 1961, Mithun 1981).

Northern Iroquoian is divided into two groups, the Five Nations-Huronian-Susquehannock group and the Tuscarora-Nottoway-Meherrin group. The first of these is located around Lake Huron (Ontario, Quebec), along the St. Lawrence River (Quebec), and in southern Ontario, adjacent parts of New York State, and as far south as Pennsylvania. The other Northern Iroquoian languages were located in central Virginia (along the fall line) and North Carolina. Because of their locations, these languages figured prominently in early American history.

The Tuscarora and Nottoway were found by the Virginia colonists in southeastern Virginia and northeastern North Carolina, and they were among the first Indians contacted by the settlers. The Tuscarora were early trading partners of the English, but were soon eliminated as middlemen, and ultimately the Tuscarora removed themselves from the area and went to live with the other Iroquoians, in the north. These languages did not have any significant contact with the Southeastern Indians. Nottoway is extinct. The North Carolina Tuscaroras, among the first Indian groups to have extensive contact with English settlers, moved north to join other Iroquoians in New York State in the 18th century, and they were adopted into the League of the Iroquois in 1723. In the 1990 US Census, there are reported to be 30 speakers (of 1000 tribal members), all in their seventies.

The Cherokee once inhabited the southern Appalachian region of Tennessee, North Carolina, South Carolina, Georgia, and Alabama, but were "removed" (forced to march) to Oklahoma in 1838-39. Some Cherokees did not leave, and in 1849 they were allowed to settle on land purchased for them. As a consequence, there are now Oklahoma Cherokees and Eastern Cherokees, and there are conservative groups among each sector. The 1990 US Census reports 22,500 speakers (of 308,132 tribal members), including a large proportion of younger speakers, indicating that the language is likely to survive into the foreseeable future. In some communities (notably, Snowbird, NC) there are revitalization movements, and children are learning the language in tribal schools.

Siouan

The last of the big language families is Siouan, and Siouan is quite complex. There is a two-way split between Catawban (which will become Catawba and Woccon) and what is called Core Siouan. Core Siouan has three branches; from west to east, they are: Mandan, Missouri River Siouan (Crow and Hidatsa), and Mississippi Valley-Ohio Valley Siouan. The latter has two branches, one called Ohio Valley Siouan (or Southeastern Siouan), and the other called Mississippi Valley Siouan.

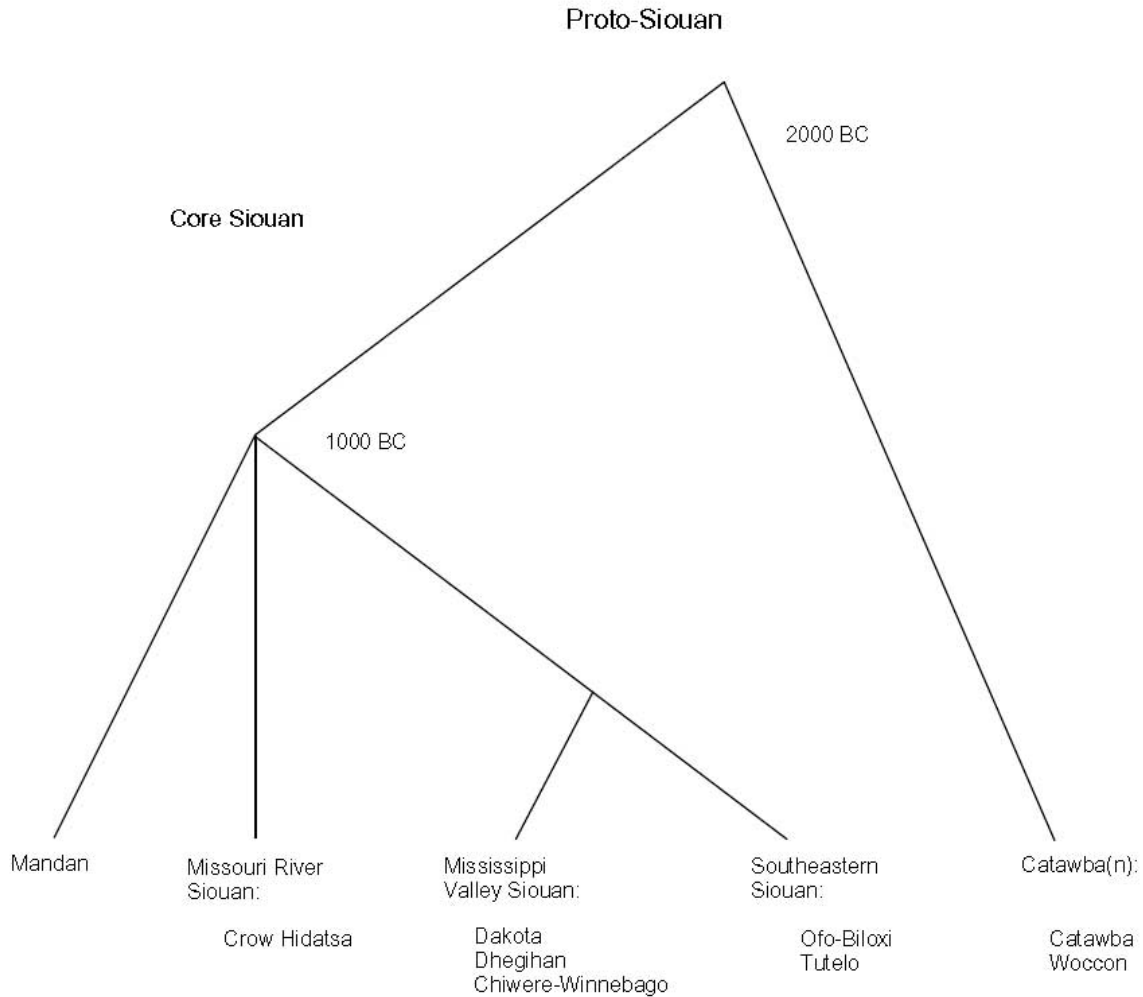


Figure 4. The Diversification of Siouan Languages.

Languages from two of the major branches are involved in the Southeastern culture area. Catawba and its congeners (Woccon, etc.) are involved with the Southeast in the Carolinas. Quapaw, one of the Mississippi Valley Siouan languages, borders Muskogean along the Mississippi River in eastern Arkansas. All of the Ohio Valley (Southeastern) Siouan languages are involved, but they are widely scattered: Tutelo, Saponi and Occaneechi are north of Catawban (up a tributary of the Ohio and on to the other side of the Appalachians). Ofo is supposed to have been in the Ohio River Valley (but is first attested in northwestern Mississippi), and Ofo's sister language, Biloxi, was located on the Gulf Coast, on Biloxi Bay.

Of the Southeastern Siouan languages in the eastern region, Woccon, in Tidewater North Carolina, became extinct fairly early due to contact with the English of the Virginia colony. The Tutelo, from western Virginia (near Salem), moved north and east during the 18th century, and settled for a while in Pennsylvania, under Iroquois protection. In

1753 they were formally adopted into the League of the Iroquois, and settled in New York State. After the American Revolution, they moved with the Cayuga to Canada.

The remaining eastern Siouan language, Catawba, was spoken by one of the most important tribes for the early English colonies in Virginia and the Carolinas (along with the Cherokee). However, a smallpox epidemic in 1759 wiped out nearly half the tribe. They were later scattered, some going to Oklahoma to settle with the Choctaw Nation, some settling with the Cherokee, and some remaining in a small reservation near Rock Hill, South Carolina. There are still a few speakers, but there are only 500 declared Catawbans, so the language is considered obsolescent. In any case, it appears to have been "creolized" through contact with so many other Indian languages (Booker *et al.* 1992:410, cited in Campbell 1997:141).

In the western region, Ofo and Biloxi are extinct, and Quapaw has only a few speakers (34 out of 2000 tribal members). The Quapaw once occupied parts of Arkansas, Kansas, and Oklahoma, but were moved briefly to Louisiana in the late 19th century, and in 1867 they were moved to a small area in northeastern Oklahoma. The Ofo are thought to have originally resided in southern Ohio (before the 1670s), although this is anecdotal and not attested in any historical accounts. If they were in the upper Ohio River valley, they might represent a much larger population, since otherwise there is little evidence to indicate what Indian languages were spoken in this important region (the old Hopewell homeland). In the historical record, the Ofo are first reported in 1673 on the east bank of the Mississippi River, below where the Ohio River joins the Mississippi. By 1690 they had moved to the Yazoo River in Mississippi, near the Tunica. They then drop out of the historical record until 1908, when John Swanton found a single surviving Ofo speaker living among the Tunica in Louisiana – the source of all we know about the Ofo language. The Biloxi were originally located around Biloxi Bay (on the Mississippi Gulf Coast) and on the lower Pascagoula River, where they were contacted by French and Spanish explorers. They later moved on to several locations in Louisiana, and then on to Texas and Oklahoma.

The scattered remains of Siouan are very interesting in terms of culture history because related languages are *prima facie* evidence of common cultural heritage and intimate social relationships. A fact that has to be explained is that Ofo and Biloxi, two closely related languages, are widely separated geographically. One was located far up the Ohio River, the other on the Gulf Coast. Likewise, the Ofo-Biloxi are related most closely to Tutelo-Saponi-Occaneechi, in Virginia. This group of "Southeastern Siouan" stands in opposition to "Mississippi Valley Siouans," whose territory lies in part between Biloxi and the other Siouan languages. These complex linguistic and geographical relations form part of the data that has to be accounted for by an integrated theory of North American prehistory.

Caddoan

Caddoan languages were found along the western fringe of the Southeastern culture area, and at least Caddo itself should be considered a Southeastern language. The language family has two branches: Caddo, and the rest (Northern Caddoan). Northern

Caddoan includes Wichita and Kitsai-Pawnee (and the latter includes Pawnee and Arikara). The Caddoan language family once stretched from northwestern Louisiana and northeast Texas, through southwest Arkansas and on across the Great Plains to South Dakota. Caddo is quite different from the other languages in its phonology (having glottalized consonants as well as m, which is otherwise rare in Caddoan), and Caddo is also in the area of Southeastern culture, especially the site of Spiro, Oklahoma, where some of the finest Southeastern (Mississippian) art objects were found. Caddo is still spoken in Oklahoma in part of its former range, but there are only about 141 speakers (in a group of about 1800 people), and only older adults (50 and above) speak the language.

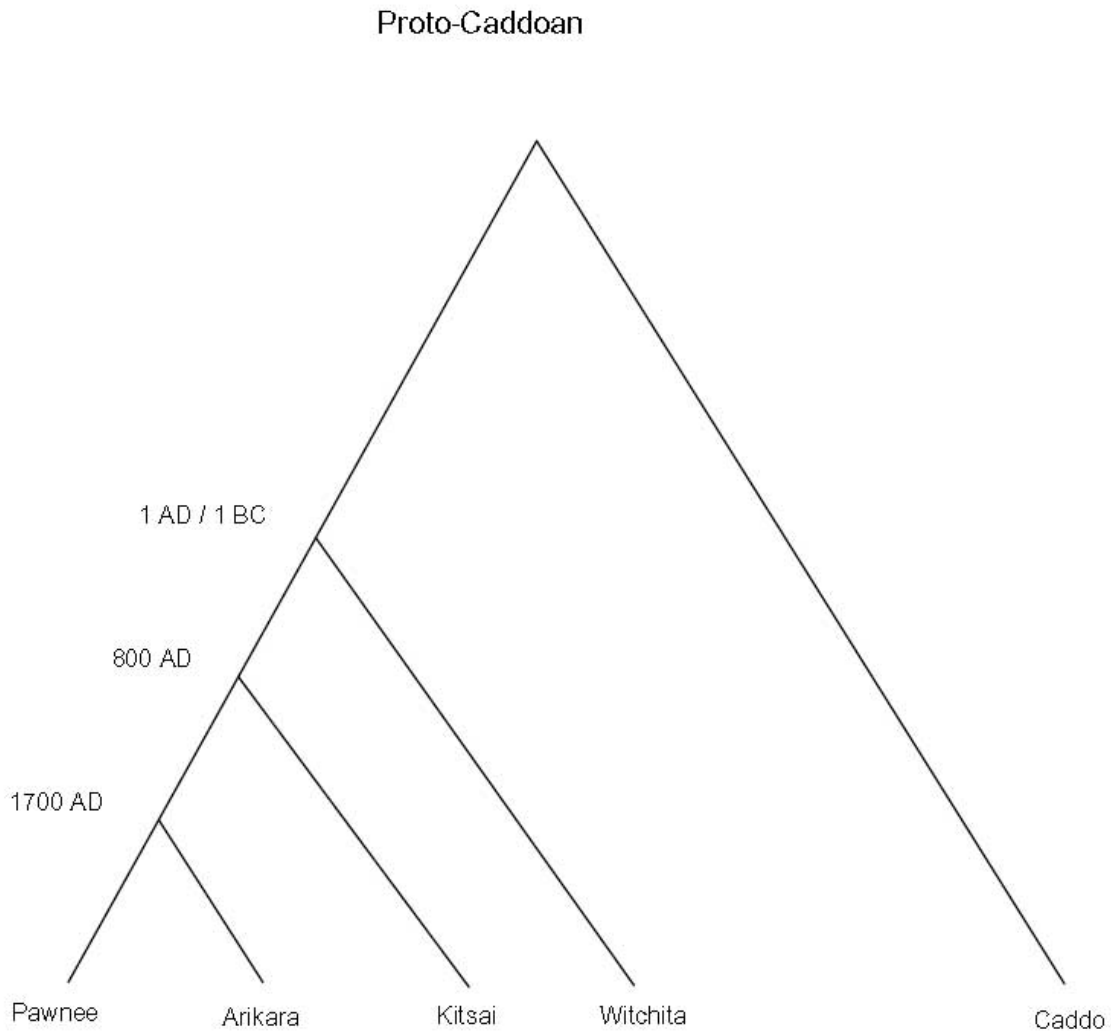


Figure 5. The Diversification of Caddoan Languages (Hollow and Parks, 1980).

Yuchi

Yuchi is an isolated language, a language which has not been shown to be related to any other. Speakers of the language were originally located along several rivers in eastern Tennessee; some Yuchi later settled in West Florida, and some joined the Seminole for the Seminole Wars (Swanton 1952:116, 120). The language is still alive, but barely. The 1990 US Census reported 84 speakers, living near Sapulpa, Oklahoma, along with a total of about 1500 people who assign themselves to the Yuchi ethnic group. The few speakers include only adults over 70, so the language will soon be extinct, barring some kind of cultural and linguistic revival.

The Languages of the Lower Mississippi

There is a cluster of unclassified languages that lie along the lower Mississippi River, from southeastern Arkansas and northwestern Mississippi to the Mississippi River delta and southern Louisiana. Atakapa, Chitimacha, Natchez, and Tunica are the languages about which there is at least some information. Haas (1966) proposed that all of these languages might form a language family ("Gulf"), and might be related to Muskogean, but this idea has not found general approval. Likewise, scholars remain unconvinced by her suggestion that this set of languages could also be related to Algonquian-Ritwan (Haas 1978:250-256).

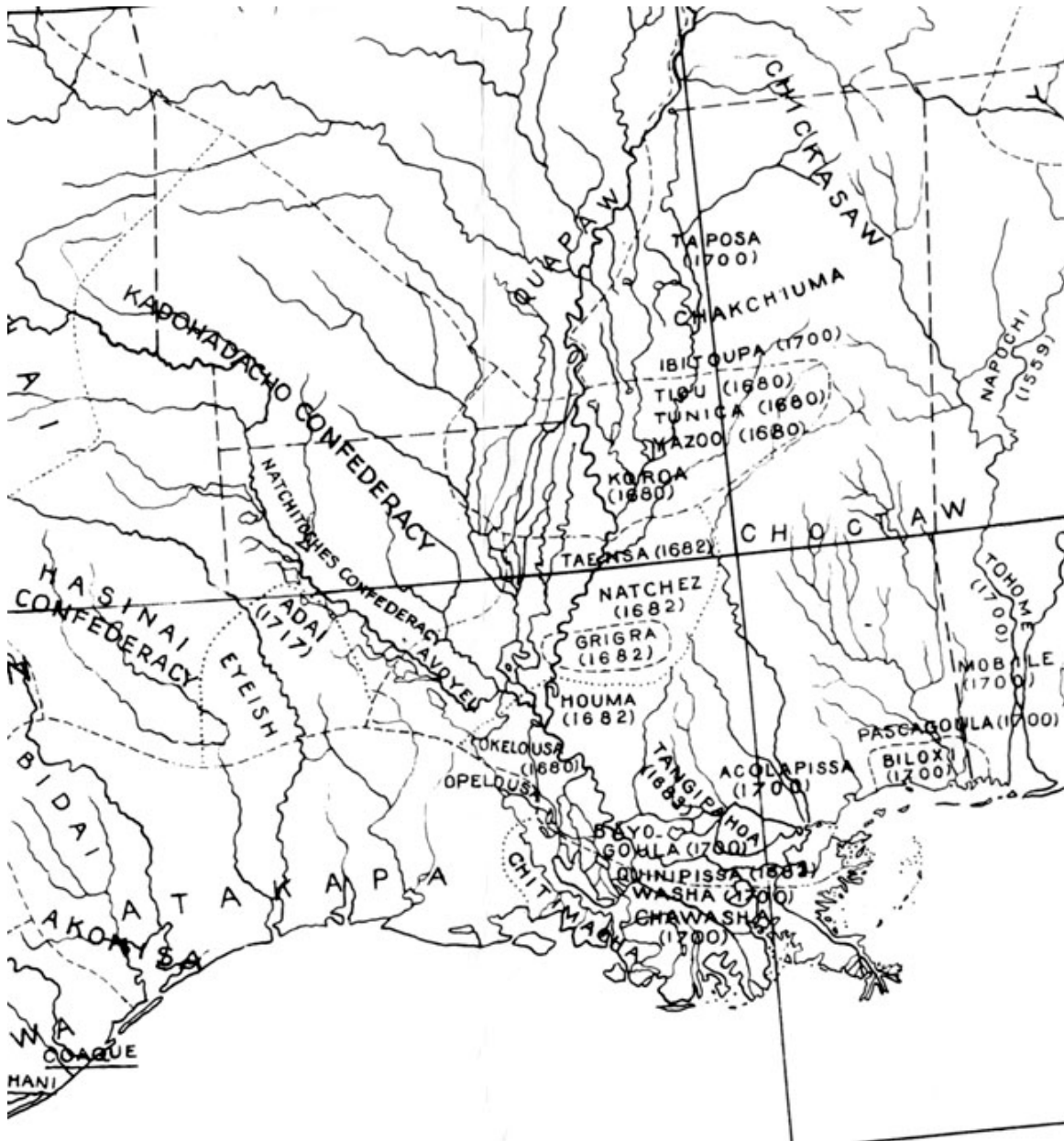


Figure 6. The Languages of the Lower Mississippi River. Detail from Swanton (1952: Map 5). Note that all the language names within the dotted lines surrounding "Tunica" and "Natchez" are varieties of those two languages.

If the Lower Mississippi languages do not have a common ancestor, the shared features that made Haas put these languages together must be accounted for another way. Marked similarities between languages are due either to (1) universal tendencies (things that might be found in any language, regardless of its history), (2) genetic relationship (common cultural heritage), or (3) diffusion (spread of features from one unrelated language to another).

A likely explanation for the similarities between Gulf languages and between them and Muskogean is diffusion. That is, it appears that there was a cluster of unrelated languages along the Mississippi River which interacted so intimately with one another that they came to share significant features, forming a (small) linguistic area (Sprachbund). Haas was convinced these languages were related because she could use verb paradigms in Tunica and other "Gulf" languages to solve problems posed by Muskogean verbs. But if these common patterns were not due to common ancestry and shared heritage, they might have been regional styles that were adopted by different languages in the distant past, and still have the characteristics Haas noted. Since some linguists think Muskogean spread across the Southeast from a point of origin north of Tunica, this hypothesis is attractive.

Tunica

The Tunica were first reported (by the French explorer La Source) along the Yazoo River, in Mississippi, in 1699, but tribal history has it that they were earlier located up the Mississippi, at the site known as Quizquiz, a town above the junction of the Arkansas River and the Mississippi, which was visited by de Soto in 1541 (Brain 1977). In both locations the Indians were engaged in the salt trade, which continued to be a major industry for the Tunica, who boiled down salt solutions from salt wells or seeps. They also profited from the sale of horses to other Southeastern Indians and to the incoming European settlers. The Mescalero Apache of New Mexico appear to have been among the suppliers of horses and the consumers of Tunica salt (Farrer 1991:63).

In 1706 the Tunica were driven from the Yazoo by Chickasaw raids (the Chickasaw having allied with the English and the Tunica with the French). They moved downriver past the Natchez, old enemies, to a site at the confluence of the Red River and the Mississippi that later became part of Angola prison farm. Here, in 1731, the Natchez offered to make peace, but betrayed the Tunica at a feast and slaughtered many of them. The Tunica moved their settlement a bit further south for a few years (to Trudeau). After the French withdrew from Louisiana, in 1763, the Tunica moved again, this time to Marksville, Louisiana, up the Red River, where they received a land grant from the Spanish, who were briefly in control of the territory. Eventually this location became a reservation housing not only the Tunica but the Biloxi as well, along with remnants of several other tribes (including the last Ofo). The language is no longer spoken, but the tribe, with the new Grand Casino Avoyelles, is doing quite well.

At the Trudeau site, near Angola farm, a huge buried treasure was discovered in the 20th century. This may be the burial place of the Tunica killed by the Natchez, since it was a fairly short time that the Tunica lived in this location. In any case, this was a mortuary deposit accompanied by about 100 burials: "dozens of firearms, scores of European ceramic vessels, hundreds of metal kettles, hundreds of thousands of glass beads, a vast assortment of tools, ornaments, and other miscellany, as well as a goodly representation of native artifacts" (Brain 1977). This huge hoard, one of the largest ever found in the United States, was first looted and later recovered, and is now on display at the museum on the Marksville reservation. It represents the level of wealth acquired by

the Tunica through the salt trade and the horse trade. Given the nature of the ceramics in this collection, it is interesting that one of the dozen French loan words into the Tunica language (Haas 1947) is chinoise (Chinese style ceramics).

The Tunica language is known largely from the work of Mary Haas. She worked with the last fluent Tunica speaker in 1933 and 1938-39, and she presented her study as a doctoral dissertation, under the direction of Edward Sapir at Yale, in 1935. (Haas was one of the University of Chicago graduate students that moved with to Yale with Sapir to Yale in 1931; at this time she was married to Morris Swadesh, who was working on Chitimacha.) Haas' informant was Mr. Sesostrie Youchigant, born about 1870. A revised and expanded version of her dissertation (143 pages) was published in 1941 in a volume of the Handbook of American Indian Languages. She also published a grammar sketch in Linguistic Structures of Native America (Hoijer *et al.* 1946), a dictionary (Haas 1953: 175-332), and a set of Tunica texts (Haas 1950; 174 pp.). This is the standard set of studies that a linguist produces to provide basic documentation in a language, and it was linguists like Haas that set the standard.

Natchez

The Natchez language is now extinct. The Natchez were first reported by La Salle in 1682. By the 18th century they were located in eight or nine villages along St. Catherine's Creek, east of present-day Natchez, Mississippi (Campbell 1997:147). The French were quite attracted to the Natchez, and there are a number of early accounts of Natchez customs, religious practices, form of government, and so on (e.g., du Pratz 1956 on Natchez burial customs). These reports are fairly well known in anthropological circles, because the Natchez class system poses some problems for kinship studies. The system as described is unworkable, and there is a sizeable literature by people trying to propose solutions to the "Natchez paradox" (Buchler and Selby 1968:155-159).

The French attempted to missionize the Natchez, but they resisted, fighting several wars with the French, in 1716, 1722, and 1729. In the last war (at Natchitoches) more than half the Natchez were killed, and the French took Natchez for themselves. In 1731, the year some Natchez avenged themselves on the French by slaughtering the Tunica, allies of the French, the French shipped about 400 Natchez to the West Indies as slaves. The rest scattered throughout the Mississippi lowlands, some settling with the Chickasaw, others with the Upper Creeks. They could not take refuge with any of the French allies (Choctaw, Tunica, Caddo, Atakapa and Quapaw), and some of them went east to the Carolinas, and ultimately on to live with the Cherokee, who apparently had high regard for the Natchez as a race of wizards and conjurers (Mooney 1899:517, cited in Crawford 1975: 62).

Various brief Natchez vocabularies were collected in the 19th century, and Swanton compiled a comparative vocabulary and then went to work with five Natchez speakers near Muskogee, Oklahoma, in 1907, 1908, and 1915, collecting 113 pages of text from the last three speakers. Mary Haas found two speakers still alive in 1934, and collected more material, which has appeared as data in a number of her articles (Haas 1939 on

Natchez and Chitimacha kinship terminology; Haas 1956, a comparison of Natchez and Muskogean). No definitive study of the language has been published.

Chitimacha

When first encountered by the French about 1700, the Chitimacha were located in the wetlands of southern Louisiana, along Bayou La Fourche and the west side of the Mississippi River below Baton Rouge (Campbell 1997:146). Later in the 1700s the Chitimacha were settled along Bayou Atchafalaya and the shores of Lake Chitimacha (Grand Lake) by Bayou Teche. There were some 15 villages housing 4000 people around Grand Lake and Grand River, east of New Iberia, and across the Mississippi Delta region (NPS pamphlet, "Jean Lafitte"). The Chitimacha had hostile relations with the French and their allies from the beginning, and the French finally dispersed them in 1718. Some Chitimacha moved to nearby locations (Bayou La Fourche, Bayou Teche, and Plaquemine). The French-speaking Acadians (Cajuns) arrived in 1762, and settled in Chitimacha territory. The Chitimacha intermarried with the Acadians and gradually became French speakers. The modern Chitimacha community is located at Charenton, Louisiana, south of Lafayette, on a 300-acre reservation (see their web page: <http://www.chitimacha.com>).

A small amount of Chitimacha material was recorded in the 19th century, including Gatschet's material, which was "recorded...from an old Negro who had lived so long with the Chitimacha as to speak their language fluently (Crawford 1975, citing Swanton 1919). Swanton collected more extensive materials (1919). Morris Swadesh worked with the last two speakers of Chitimacha in 1932, 1933, and 1934, while Mary Haas was working on Tunica, and published an article (1934) on Chitimacha verbs of derogatory or abusive connotation. Later he published articles on phonology (1934, 1937) and a grammar sketch (1946, in Linguistic Structures of Native America). Swadesh was impressed by how little French and English had affected Chitimacha, and even the last speakers spoke a language unaffected by the European languages (few loan words, for example), even though all the Chitimacha spoke French. The last two fluent speakers died in 1934 (Benjamin Paul, Swadesh's main informant) and 1940 (Delphine Ducloux). Some Chitimacha still knew a few words in 1969 (Crawford 1975: 62).

Atakapa

Atakapa is now extinct. It was originally spoken along the Gulf Coast from Vermillion Bay and lower Bayou Teche, in Louisiana (the border with Chitimacha), west to Galveston Bay and the Trinity River basin in Texas. There were four or five bands, each associated with a river system (including Vermillion Bayou and the Mermentau, Calcasieu, Sabine, Neches, and Trinity Rivers; Campbell 1997:145-146). A French expedition in southern Louisiana in 1703 lost a man to the Atakapa, who were reported to have eaten him, and the ethnic name, which comes from Choctaw, means 'people-eaters', hattak-apa. Gatschet and Swanton (1932) collected most of the known material on the language, and suggested they might be the tribe encountered by Cabeza de

Vaca on Galveston Island in 1528. In 1712 Jean Berenger collected a vocabulary near Galveston Bay and some material was collected in Louisiana in 1802. Some Atakapa survived near Lake Charles until the early 20th century, when Swanton collected material from the nine remaining speakers in 1907-08. Putting all known material together, Swanton published a grammar and text (1929) and later a dictionary (Gatschet and Swanton 1932). A few last words of Atakapa were taken down by Mary Haas and Morris Swadesh in 1934.

The Languages of Peninsular Florida

The original Indian languages of Peninsular Florida are long since extinct, and the only surviving indigenous languages in Florida are those of Indian groups that moved into Florida late in their history, principally the Seminole/Mikasuki. There is very limited information on some of these languages. As in other areas, we know many tribal names, but not much is known about the languages. However, there are two major languages of Florida about which enough is known for there to have been some very interesting questions raised about them. Both have been studied by Julian Granberry (1993, 1995), and what follows is largely based on my reading of his work.



Figure 7. The Languages of Peninsular Florida. Detail from Swanton (1952: Map 5). Note that Osochi, Yustaga, Utina, Ocale, and all other language names between the dotted lines are varieties of Timucua. All language names south of the dotted lines are varieties of Calusa.

Timucua

By far the most important Indian language of pre-contact Florida was Timucua. The western border of Timucua was the Aucilla River (east of Tallahassee), the border with Apalachee. Timucua was spoken from the Aucilla River east to the Atlantic Ocean,

south to Cape Canaveral and north up the Atlantic Coast for an indeterminate distance (probably only the Georgia coast, not up into South Carolina). From its northern boundary (with Muskogean), Timucua was spoken throughout Central Florida down to about Orlando (with the possible exception of the western coast, which Granberry thinks was occupied by unidentified Muskogean). Outside this core area of Timucua, scattered Timucua populations occurred throughout the Southeast. Granberry notes populations in central Georgia and Alabama (Oconi and Tawasa; see Swanton 1952: 112, 144-145). He also remarks that the languages have loan words from Choctaw and languages as far west as Natchez, so the Timucua at least had cultural contacts across the Southeast, if not resident populations.

Within the main Timucua territory, there were dialect differences that corresponded to major political subdivisions. Granberry lists some eleven tribal names, and suggests a couple of others that might also be dialect groups. There were two dominant dialects; the Mocama dialect was spoken along the Atlantic Coast, and is the variety of Timucua about which we have the best information, since this is where the Spanish missionaries produced their materials on the language. The other major dialect, Timucua proper, was spoken to the west of the St. Johns River.

Ponce de Leon encountered the Timucua near St. Augustine in 1513; Panfilo de Narvaez went north through Timucua country (Tampa Bay to Tallahassee) in 1528. Hernando de Soto followed more or less the same route in 1539. In 1562-64 French settlements were attempted at the mouth of the St. John's River, but they were driven out by the Spanish in 1565 when the Spanish founded permanent missions. Because of the success of the Spanish missions in peninsular Florida, the Timucua became Christianized and acculturated, and when Spanish power waned and the Spanish departed from their Florida colony in 1763, they took the last of the Timucua with them, settling them in Cuba, in San Agust'n Nueva, near Havana (at Ceibamocho, the "Speaking Place by the Ceiba Tree"). While some Timucua may have remained in Florida, to merge with other remnant populations and ultimately with the incoming Seminoles, the language is no longer spoken.

There are nine surviving primary sources on Timucua, all from the early 17th century. Seven of these are of substantial length, so the language is fairly well documented. From these sources, Granberry (1993) has been able to abstract a grammar of Timucua and a sizeable dictionary, including a list of dialect forms attesting the various regional varieties of Timucua, and a number of loan words from other languages that testify to Timucua's far-flung cultural contacts.

Much more intriguing than this descriptive material is Granberry's attempt to find the nearest linguistic relatives of Timucua. It should be noted that while there are a few scattered loan words from Muskogean languages in Timucua, basically everyone agrees that Timucua is not Muskogean and is not related to Muskogean, nor is it relatable to any other known North American language family. Granberry, in fact, has made a reasonable case for the closest relatives of Timucua being South American languages, specifically languages of the Warao group, spoken around the mouth of the Orinoco River. These languages are members of the Macro-Chibchan language stock, the languages of which were found across northern South America from the Orinoco

River to the Ecuadorean coast, and north through Central America to western Honduras, where they border on the Mayan languages.

However, Granberry has made a more complicated case than a simple linguistic relationship. He argues that while the grammar of Timucua resembles that of Warao, the lexicon of Timucua does not match Warao lexicon quite so closely, but has many other elements in it, some drawn from other languages across northern South America (as well as a few from North American languages like Muskogean, and including some which had to come from proto-Muskogean, not any more recent language).

On the basis of his analysis of the origins of Timucua vocabulary in these various languages, and the chronological framework set up by archaeological associations of known or suspected Timucuan populations, Granberry believes that the origin of the Timucua language is in a northern South American trade language spoken by long-distance traders. This trade language would have arrived in Florida with small groups of traders who gradually established a larger presence and ultimately permanent settlements, mixing with local populations and adding vocabulary from Southeastern languages as they expanded their trade network. Words borrowed from languages as far west as Choctaw and Natchez indicate just how far-flung Timucua contact was. The chronology of early loans from Muskogean puts Timucua arrival in the Southeast at around 2000-1500 BC, just in time to coincide with the appearance of the first fiber-tempered pottery in Late Archaic sites in the Savannah and St. Johns River areas, likely ports for long-distance traders. Granberry's interpretation is that the major trading stock of the newly arrived Timucuans was in fact this pottery, which they traded for local products like salt (the word for which is borrowed from Alabama, Koasati or Choctaw). The Timucua gradually assimilated to Southeastern culture, so that by Spanish contact they looked much like the other Southeastern societies.

Calusa

Most linguists have considered Calusa, once spoken to the south of Timucua, dead without leaving data, and none of the usual commentators even mention the language. Once again, it is Julian Granberry (1995) who has rescued the Calusa data, analyzed it, and proposed an interpretation. In various marginal remarks and place names Granberry has been able to assemble nearly 60 terms, about 10 of them from a 1575 Memoir of a long-time captive of the Calusa. Taking the place names as Calusa involves considering all of the named ethnic groups of south Florida to speak the same language, but Granberry makes a convincing case that there was only one major language south of the Timucua. On the basis of the available data, he suggests a close relationship of Calusa to Tunica, a relationship he would explain by their mutual involvement in a long-distance trade network.

Mobilian "Jargon"

A discussion of the indigenous languages of the Southeast would not be complete without mention of Mobilian, often called Mobilian Jargon, a widespread trade language

attested from the 1700s to the 1950s (Crawford 1978, Drechsel 1996). Mobilian was a Muskogean-based pidgin used across the Gulf Coast and up the Mississippi River—even as far north as 500 miles up the Missouri River. After the arrival of Europeans, Mobilian was used by the Spanish, French, British, and others to communicate with Indians throughout the Southeast. Drechsel (1996) notes that Mobilian was not just a contact language, but was used as a buffer against intrusions into personal identity: its use by a native marked the speaker as an Indian, but not any particular kind of Indian. This use of Mobilian has created considerable confusion in Southeastern language documentation, since informants have occasionally provided Mobilian forms to investigators rather than those of their native language.

Over its recorded history of more than 250 years, Mobilian was a full-fledged pidgin, not an ad hoc "jargon." It had a fairly stable grammar and few functional limitations. Drechsel (1996) has compiled a vocabulary of some 1250 entries. The sources of this vocabulary and the patterns of grammar and syntax argue for an origin in Choctaw-Chickasaw. Drechsel notes there were other such trade languages in the Southeast, including the use of Creek in inland areas as the language of wider communication.

The Prehistory of the Languages of the Southeast

Historical records and modern observations tell us quite a bit about the indigenous languages of the Southeastern culture area, as outlined in the preceding sections. The application of the comparative method of historical linguistics, supplemented by other techniques, can also tell us quite a bit about the prehistoric nature of these languages, the societies and cultures associated with them, and the social, cultural, political and economic relations between their speakers. The theoretical and methodological core of the comparative method was established in the nineteenth century, primarily through work on the Indo-European languages, but the method has since been adopted for research on other language families.

The Comparative Method of Historical Linguistics

The application of the comparative method begins with the collection of comparable data on the set of languages whose relationships are to be tested. On the principle that languages consist largely of arbitrary conventions connecting concepts to speech sounds, the sets of sounds used to represent similar concepts across the languages are examined, and a judgment is made as to whether or not the similarities which may exist between the languages are so great as to rule out chance as an explanation. If chance can be convincingly eliminated as an explanation for similarities that go well beyond suspected universals, then the working hypothesis is that there is a historical explanation for the resemblances. Either the languages derive from a common ancestor (and the similarities are due to common heritage), or they have been in intimate cultural contact at some time in the past (and the similarities can be attributed to diffusion).

Languages which "spring from a common source" (Jones 1786) are said to belong to the same language family. The language from which they have developed over time is referred to as the proto-language of the language family. Thus, the overwhelming similarities that can be observed across the Muskogean languages indicate that these languages all derived from a common ancestor, Proto-Muskogean. Within a language family, differing degrees of similarity and precise patterns of common development (shared innovations) serve to subgroup the languages into distinct branches of the family, and to relate these branches to each other. This process of subgrouping depends on the application of linguistic theories (grounded in historical research) concerning the phenomena of language change. The principles, developed in almost two centuries of scholarship, allow the investigator to posit, for each set of structured similarities observed, the ancestral forms most likely to have given rise to this set of similar forms (taking into account the overall systems which are formed by the collectivity of similar phenomena and the emerging reconstructions).

The comparative reconstruction of the proto-language provides the base for tracing the lines of development that led to each of the daughter languages. Subgrouping of the languages is based on the innovations shared with other languages. Each language subgroup is assumed to have derived from a common ancestor, whose details can be reconstructed from a comparison of the languages derived from it. Thus a language family, as reconstructed by the linguist, consists of the attested languages on which the study is based and a series of hypothetical ancestors (the ultimate proto-language of the entire family, and the proto-languages of all the individual branches). Languages which share specific innovations with one another are assumed, all other things being equal, to have undergone those innovations at the same time, usually before the two (or more) innovating languages became separated from one another, that is, while their proto-language ancestors were still being spoken.

The application of the comparative method to material from a set of languages, then, identifies languages which have a common origin, reconstructs a hypothetical version of the original language, and traces the development of each of the daughter languages from the ancestor to the attested forms, using shared innovations along the way to subgroup the languages. A language classification, if based on the comparative method, subgroups languages by shared history. Such a classification is obviously a useful framework for the historical interpretation of other inferred developments.

The different subsystems of language contribute unevenly in the reconstruction process. Most reliance is placed on the phonological systems of the languages, since these are simpler than grammar and syntax, and their developmental processes better understood. A typical language has about two dozen structural phonological units (phonemes) which oppose each other along a number of dimensions (place and manner of articulation, voicing, nasality, etc.). Each phoneme also potentially has a number of variants (allophones), the choice between them being conditioned by the phonological context. Languages have restrictions on how the phonemes may be combined and sequenced to form words and the smaller meaningful parts of words (morphemes). These in turn have conditioned variants (allomorphs), restrictions on combinations and sequences involved in the formation of words, etc.

Phonological innovations (changes in the preexisting situation) include restructuring of the distinctive features which define the phonemes, changes in the allophonics of phonemes, merger (loss of distinction between two phonemes), split (development of two phonemes from the allophones of one), changes in the rules for combinations and sequences, and so on. All these processes are well understood by linguists, and their results can be recognized in comparative language data. Grammar (morphology and syntax) is more complicated and less well understood, so that most historical analyses of language families are based almost entirely on the study of phonology. Second to phonology for historical insights is the lexicon of the languages, their vocabulary, the words and word classes which represent native thought and by which speakers communicate. Words in two daughter languages which are thought to be derived from the same word in the proto-language (because of regular sound correspondences throughout) are called cognates. Where a set of cognates exists, the existence of an ancestral form in the proto-language can be inferred. Because of the relation of lexicon to culture, lexical data are particularly suited to the investigation of inherited culture and cross-cultural contacts.

The historical reconstructions proposed by linguists are clearly hypothetical, and a reconstruction is only as good as the data on which it is based (and the skill of the practitioner). Since we must assume that there are related languages which did not survive to be attested and whose lack skews our reconstructions, the languages we reconstruct may bear only vague relations to the languages actually spoken at the time. On the other hand, there have been shining moments in the history of comparative linguistics when hypothetical reconstructions have been essentially confirmed by the discovery of hitherto unsuspected written records which attest to the patterns reconstructed.

In the preceding sections, the history of Southeastern languages has been organized by language family, reflecting the relationships established by linguistic inquiry. For each of those language families, there must have existed at some time a proto-language, out of which the daughter languages developed, in a series of stages represented by the subgrouping of the languages. The details of classification are important, since the subgrouping reflects the amount of shared history manifested by a set of languages. Once such a classification is established, further insights into the prehistory of the languages can be sought.

Language Distributions and Migration Theory

The distribution of the languages in a family can be interpreted historically by reference to the chart which represents its chronological development. The methodology for such interpretation, one version of which is known as "migration theory" (Diebold 1960), uses a least-moves strategy to generate the simplest hypothesis concerning migrations (or population movements) which connect the single-point common origin of the languages (the homeland of the proto-language) and the multiple-point attested distribution of the languages in historical times. Thus, if languages A, B, and C are related, A and B form one branch of the family, but A is isolated while B and C are located next to one

another, what is the simplest set of moves which could have created this situation? In this case, the answer is: In stage 1, either proto-C or proto-AB moved away from the homeland; in stage 2, B moved to join C. There is no way to choose between the alternatives of stage 1 on the grounds of number of moves, since A and B do not have to have moved independently (two moves). They could have moved while still only a single group (1 move).

While real-world situations do not always lend themselves to the application of the simplistic logic of migration theory, such approaches at least limit the reasonable options and place the burden of proof on the most complex explanations.

Glottochronology and Lexicostatistics

Lexicostatistics refers to any kind of quantification of linguistic features for historical (or other) inference, and is similar to techniques long used by North American anthropologists to judge degrees of similarity, boundaries of culture areas, etc. (cf. Jorgensen 1974). Glottochronology (Gudschinsky 1956, Hymes 1960) refers to the specific type of lexicostatistics designed to derive approximate dates for the terminal stages of proto-languages (i.e., the periods when they begin to diversify into their daughter languages); these dates are commonly called "separation dates," since they reflect the period when the unified proto-language speech community separates into increasingly independent parts.

Any kind of lexicostatistics can be used to give measures of relative likeness between languages, to order the relationships within a language family. Only glottochronology attempts to put approximate dates on the nodes of the family tree. Because of this feature, glottochronology is potentially of great utility in correlating the linguistic developments with models derived from archaeology. Unfortunately, confidence in glottochronology has been undermined by numerous inappropriate applications, including some by its principal proponents, to the point at which many linguists place no credence whatsoever on its results. On the other hand it appears that, if properly applied and carefully executed, glottochronology does often provide a useful approximation of the time frame within which a language family has developed.

The technique is based on an initial empirical study of the rates of replacement of basic vocabulary items over time in a series of more than a dozen languages (Swadesh 1952, Lees 1953). The rates were found to be relatively stable, reflecting a situation similar to the carbon isotope decay that underlies radiocarbon dating. To put it briefly, counting the number of cognates in basic vocabulary between two demonstrably related languages leads to a calculation of how long those languages have been developing independently, that is, how long it has been since their common ancestor began to diversify into the distinct languages.

Reconstructed Lexicon

A byproduct of the application of the comparative method to a language family is the possibility of reconstructing the lexicon of the proto-language. For each cognate set in the daughter languages, there must have existed an antecedent form in the proto-language. This is an incredibly useful concept for reconstructing prehistoric cultures, since the nature of the vocabulary of a language reflects the cultural knowledge and concerns of its speakers. Inferences are more reliable when based on whole complexes of terms rather than single isolated items, since the possibilities of sample bias are diminished. Reconstruction from Indo-European cognate sets of dozens of terms relating to pastoralism and virtually none for agriculture (Thieme 1964) informs us of the subsistence technology of the Proto-Indo-Europeans, as does the reconstruction for Proto-Mayan of dozens of terms related to agriculture (Kaufman 1960). Geographical and biological terminology reconstructible to the proto-language also may help locate the proto-community in space (e.g., terms for flora and fauna of limited distribution).

Small but culturally important domains may also be subjected to semantic reconstruction. As its data, this kind of reconstruction takes semantic analyses of limited lexical domains and reconstructs the proto-semantic system along with the lexicon, using the same principles as phonological reconstruction. This technique has been most widely applied to kinship systems, since the semantics of kinship are well established, and the limited set of terms involved makes the domain manageable.

Non-native Lexicon

The possibility of identifying native lexicon through the application of the comparative method also results in the possibility of identifying non-native lexicon, lexical items that are not inherited from the proto-language, but which have been acquired through diffusion from unrelated languages. Non-native items are identifiable because their constituent sounds do not participate in the same regular correspondences that native items display, since they have distinct histories. The utility of non-native lexicon (loan words) is that they result from culture contact, and can therefore give information about the nature of that contact, and sometimes even its chronology.

Archaeological Correlations

The techniques outlined above provide an independent line of evidence that is most convincing if it can be tied to a materially-attested culture known from archaeological research. In correlating the two lines of evidence, the genealogical classification of a language family, especially when combined with glottochronology, tells us more or less how many separate social units to look for on the ground at different stages of development. Reconstructed lexicon (and, for that matter, non-native lexicon) may tell us what kind of a culture to look for, and where to look for it. Taken together, the techniques of comparative linguistics generate a model of prehistoric societies and their cultures that is dangerous to ignore in the interpretation of the prehistory of a given region. Unless the linguistic facts can be explained as well as the material facts, something is lacking in the interpretation.

The Southeastern Linguistic Area

A definitive, or even adequate, linguistic prehistory of the Southeastern linguistic area has not yet been written, although many studies exist which could form the basis for at least a preliminary sketch. Many of the individual languages have been documented, and the language families have been classified. A sizeable literature (Booker 1991), including theses and dissertations (Singerman 1996:53-99, 171-173), treats a wide range of topics, from specific points of language structure to general patterns of linguistic development. Brief overviews of Southeastern linguistics have been drafted (Campbell 1997:140-152, Crawford 1975), as well as notes on Southeastern languages and culture history (Foster 1996:109-110). But there is no satisfactory synthesis of the available material. On the other hand, it is possible to point out some of the general patterns observed, and to suggest some of the lines along which future work could proceed.

Let us begin with inferences based on the classifications of the languages, their earliest known distributions, and the few glottochronological dates which have been calculated (or equivalent estimates of time depth deriving from some other technique). In terms of the gross archaeological periods which have been established from material remains, we can propose the following working hypotheses.

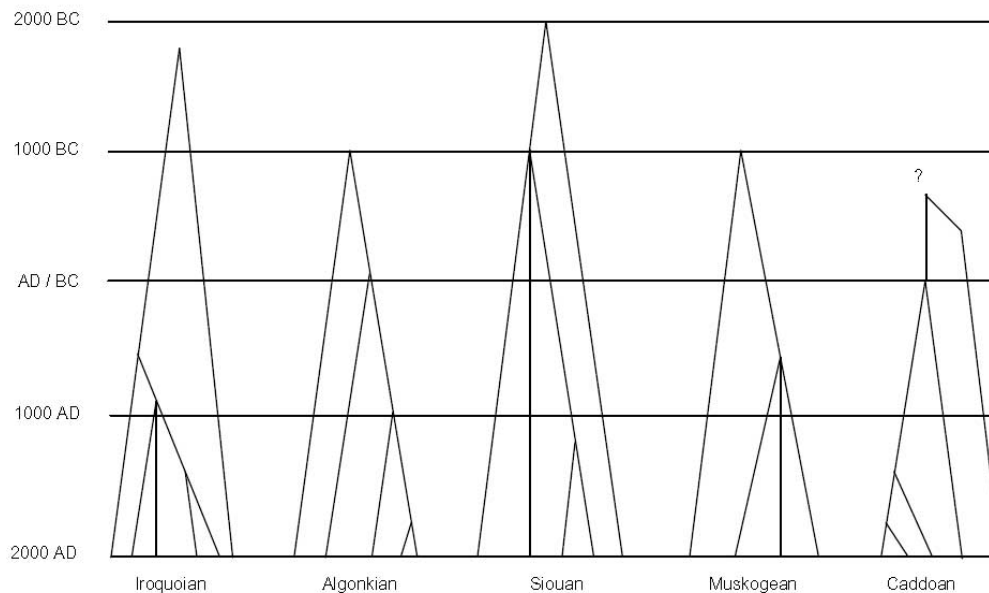


Figure 8. Comparative Chronologies for Southeastern Language Families. Lines indicate time-depth from proto-languages to modern attestations. Cultural reconstructions are theoretically possible at the level of proto-languages.

Archaic Period (8000 BC-1000 BC). Early on in the Archaic, perhaps as early as 6000 BC (Proulx 1980, 1984), Algic (Algonkian-Ritwan) separated into Ritwan and Algonkian. The former moved toward its historic location in California; the latter may at some early time have been located near Salish, as indicated by shared linguistic patterns. Around 2000 BC, Siouan occupied the Missouri and Ohio River valleys, and its eastern branch, Catawban, occupied areas on the eastern (Atlantic) side of the Appalachian Mountains. From east of the Great Lakes, the earliest phase of Iroquoian migration (2000-1500 BC) involved the southern Iroquoians, who would become the Cherokee. By the end of the Archaic, around 1200 BC, Algonkian appears to have been centered around the Great Lakes (Siebert 1967). From that region, Algonkian spread outward, in all directions, beginning around 900 BC (Siebert 1967:36-40). The spread of Algonkian would ultimately take it to the north of the hypothetical Siouan distribution, all the way to Nova Scotia.

Burial Mound Period (1000 BC-AD 700). During this period the Eastern branch of Algonkian (a dialect chain within a dialect chain) began its spread down the Atlantic Coast. Iroquoian, bearing Woodlands culture (e.g., the bow and arrow), expanded southward from its homeland east of the Great Lakes (Lounsbury 1961, Mithun 1981). A piece of Northern Iroquoian (later to become Nottoway and Tuscarora) also moved south, east of the Appalachians, as far as Virginia and North Carolina.

Muskogean diversified into a Western (ultimately Choctaw and Chickasaw) and an Eastern subdivision, beginning about 1000 BC (Broadwell 1992); this may be evidenced by regional differences east and west of Mobile Bay and the Black Warrior River that appear between 1200 BC and 500 BC, the Middle "Gulf Formational Stage" (Walthall 1980). Eastern Muskogean began to diversify internally between 1 and 500 AD (Broadwell 1992), forming the three branches attested historically.

Between 1000 BC and 700 AD, Core Siouan (Siouan other than Catawban) diversified into three branches, two of which were further subdivided (Rankin 1993). Further diversifications took place in the next period. In the west, Caddo proper had separated from Northern Caddo, and those languages had begun to diverge from one another by the end of the first millennium BC (Hollow and Parks 1980).

Temple Mound I Period (AD 700-1200). This period encompasses the beginnings of the spread of Mississippian culture, from the area of the Mississippi River. The many movements of Siouan populations during this period would appear to be related to those developments. Apparently, parts of Mississippi Valley-Ohio Valley Siouan became associated with the riverine trade network. Of the Ohio Valley Siouans, Tutelo (with Saponi and Occaneechi) joined Catawba to the east (at the upper end of tributaries to the Ohio River). Biloxi moved to the Gulf Coast. Ofo stayed on the Ohio River (moving downriver to the Mississippi as late as historic times). Of the Mississippi Valley Siouans, Quapaw would become part of the Southeastern culture area, but its close relatives the Omaha, Kansa, etc., would not, nor would its more remote relatives the Crow-Hidatsa and Mandan.

Temple Mound II Period (AD 1200-1700). Mississippian culture continued to spread across the Southeast, and Western Muskogean became associated with the

riverine/coastal trade network. Western Muskogean dominated the western sphere of the Southeast, and the trade language called Mobilian developed from Choctaw-Chickasaw roots (Crawford 1978, Drechsel 1996, 1997). This language was used up the Mississippi and even Missouri Rivers, and across the Gulf Coast; a second version of Mobilian based on Apalachee may have been used along the Florida Panhandle coast (Drechsel 1996). Muskogee dominated the eastern sphere of the Southeast, and Creek (which Drechsel considers to be another dialect of Mobilian) developed into the trade language used throughout the upland Southeast.

Muskogean and the Southeast

Let us now focus on Muskogean, the primary language family of the Southeastern culture area. The sequence of diversifications that can be traced and their chronological placement indicate that there was an early (ca. 1000 BC) separation of Muskogean. As noted above, this appears to correlate geographically and chronologically with the break between a western, and an eastern, zone of Gulf Coast cultures that breaks along the Mobile Bay-Black Warrior River line—approximately the line between Western and Eastern Muskogean languages.

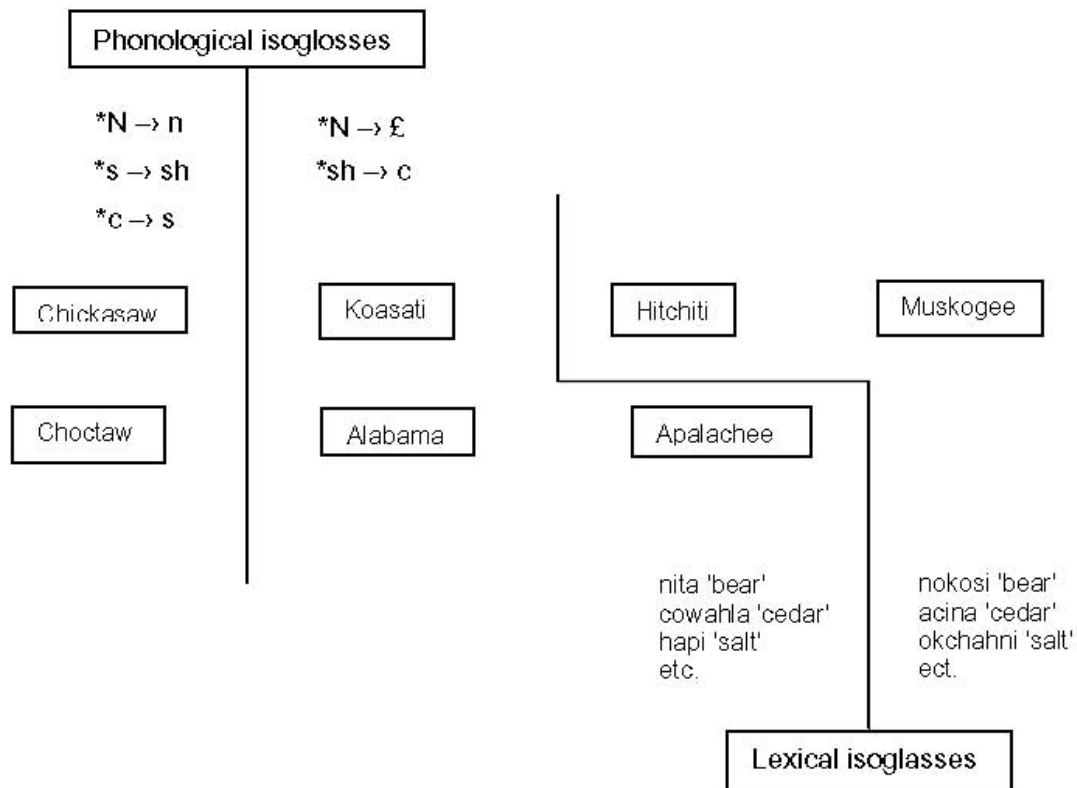


Figure 9. Muskogean isoglosses (Haas 1941).

Linguistically, this line is marked by a series of phonological isoglosses that separate the two branches of Muskogean. Haas (1941) notes that most of the consonants and vowels in Proto-Muskogean remain the same in the daughter languages. But in Western Muskogean (west of the Mobile-Black Warrior line), Proto-Muskogean *N becomes /n/ as opposed to Eastern Muskogean /ɲ/ (voiceless ɲ). West of the line, Proto-Muskogean *s merges with *sh as /sh/, and *c (ts~ch) becomes /s/. East of the line, *s remains /s/, and *sh merges with *c as /c/. These changes result in virtually all of the regular correspondences of non-identity among Muskogean consonants (limited developments of *kw or *p accounting for the rest).

But while the isoglosses for these phonological changes coincide along the Mobile-Black Warrior line, the isoglosses representing lexical distributions do not follow the same line. Rather, lexical isoglosses place Alabama with Western Muskogean, while Koasati follows the patterns of Eastern Muskogean (Haas 1941). This suggests differential regional relationships for the two languages of the Alabama-Koasati-Apalachee branch of the family. (Data from Apalachee are too limited to allow similar analysis.)

Similar cross-cutting distributions of more limited scope have led some observers to speak of Muskogean as a dialect chain, probably missing many links (Nicklas 1994:15-16, cited in Campbell 1997:148). That is, Muskogean is a language family whose members were never really separated from one another, but continued to participate in regional patterns of diffusion of cultural and linguistic elements.

Glottochronology

The most extensive glottochronological treatment of Muskogean appears to be that of Broadwell (1992), in a paper presented to a conference on Muskogean. Broadwell compares Choctaw and Chickasaw (the members of Western Muskogean) to each other, and then compares each to Alabama, Mikasuki, and Creek (representing the three subgroups of Eastern Muskogean). His immediate purpose is to test the contrasting models of diversification proposed by Haas (1941), modified by Booker (1993), and the radically different model proposed by Munro (1987).

Haas' model (followed above) places Choctaw-Chickasaw in one branch of the family (Western), and places the others in coordinate branches of the other major branch (Eastern). Booker's modification rearranges Eastern Muskogean to put Alabama-Koasati and Hitchiti-Mikasuki together in a sub-branch of Eastern Muskogean opposed to the other sub-branch, Creek-Seminole. Choctaw-Chickasaw still constitutes Western Muskogean. The opposing model proposed by Munro places Creek and Seminole (Muskogee) in one major branch; the other branch divides first into Hitchiti/Mikasuki versus the rest, which then divides into the two remaining pairs of languages. Thus, in one model, Choctaw-Chickasaw and Alabama-Koasati are close relatives; in the other model, they are as far apart as any set of languages within Muskogean. The same is true of Creek-Seminole versus, say, Hitchiti/Mikasuki. The models agree only in that Choctaw-Chickasaw and Creek-Seminole are at opposite poles of the family. Broadwell

proposed to test these models by seeing which model best predicted the glottochronological figures.

While the comparison of Choctaw and Chickasaw suggests they separated from each other about 539 BP, just over 500 years ago, the Haas model predicts that since they constitute a branch of the family, they should show the same relationships to the other languages. Thus, the calculated separation date for Choctaw-Alabama is 1324 BP, and that of Chickasaw-Alabama is 1377 BP, a close match. Dates for separation from Mikasuki are 1804 BP for both Choctaw and Chickasaw. Separation dates for Creek are 2954 BP and 2645 BP, respectively. However, Broadwell concludes that these figures support the Munro model of diversification, rather than that of Haas/Booker. In accordance with that model, Alabama should be closer to Mikasuki than to Creek, and Mikasuki should be closer to Alabama than to Creek. Creek should be about equidistant from each of the other sets of languages. The critical figures for a test of fit with the two models are the following:

<u>Haas Model Test</u>		<u>Munro Model Test</u>	
The figures in each set should be the same:			
Creek-Alabama	2228 BP	Mikasuki-Alabama	1529 BP
Creek-Mikasuki	2102 BP	Mikasuki-Choctaw	1804 BP
Alabama-Mikasuki	1529 BP		
		Creek-Mikasuki	2102 BP
Choctaw-Alabama	1324 BP	Creek-Alabama	2228 BP
Choctaw-Mikasuki	1804 BP	Creek-Choctaw	2954 BP
Choctaw-Creek	2954 BP	Creek-Chickasaw	2645 BP
Chickasaw-Alabama	1377 BP		
Chickasaw-Mikasuki	1804 BP		
Chickasaw-Creek	2645 BP		

Since there is no established metric for judging such results, Broadwell's preference for the Munro model is arguable, but there does seem to be somewhat less variation within the Munro model sets as opposed to those of the Haas model. However, it is a widely accepted principle that glottochronological dates cannot be used to determine the structure of a language family; the structure must be determined independently, on the basis of shared innovations, and the nodes of the resulting developmental tree can then be dated through the use of glottochronology. The argument thus reverts to the technical issue of phonological and grammatical correspondences, not lexical ones, and the resolution of this issue is still being debated.

On the other hand, regardless of which family tree model (if any) is appropriate for Muskogean, the glottochronological figures map easily onto geographical space. If we lay out the languages tested in their relative locations, from west to east, the figures for any language increase as the geographical distance to the language compared

increases (with only one exception Ð Alabama's relation to Choctaw/Chickasaw is reversed, but the difference is only 53 years):

	Choctaw	Chickasaw	Alabama	Mikasuki	Creek
Choctaw	--	539 BP	1324 BP	1804 BP	2954 BP
Chickasaw	539 BP	--	1377 BP	1804 BP	2645 BP
Alabama	1324 BP	1377 BP	--	1529 BP	2228 BP
Mikasuki	1804 BP	1804 BP	1529 BP	--	2102 BP
Creek	2954 BP	2645 BP	2228 BP	2102 BP	--

The consistency of these figures suggests they may be useful as an estimate of time-depth within Muskogean regardless of unsettled questions about stages of internal diversification. The largest numbers are those that separate Choctaw-Chickasaw from Creek, the two geographical extremes of the family. These figures indicate 2645-2954 years of independent development, placing Proto-Muskogean, their only common ancestor, in the range of 650-1000 BC. Broadwell (1992:7) arrives at the date 500 BC by averaging several figures. Considering the amount of retardation in lexical replacement expected in cases of continued contact, we could reasonably assign Proto-Muskogean a somewhat earlier, rather than a later, date. Internal diversification dates would depend on the model chosen, and could be calculated from the table of relationships given above.

Reconstructed Lexicon

The most extensive analysis of reconstructed lexicon is that of Broadwell (1992), although Mochon (1972) includes Muskogean in her data set. Broadwell (1992:5) notes that flora and fauna terms in reconstructed Proto-Muskogean denote species that are widely distributed in the Southeast, and do not argue for a specific homeland. However, terms that are not reconstructible include a number of primarily coastal species: pelican, cedar, Southern magnolia, bay, alligator. At the same time, some non-coastal species do form part of the lexical inventory: buckeye, chestnut, walnut, chipmunk. He also notes that a term for palmetto can be reconstructed; this is not an inland species, but there is ample evidence of trade in palmetto. A non-coastal Southeastern location is thus indicated (although a term for boat is reconstructible).

Cultigens include maize (and maize-related nouns and verbs) as well as pumpkin/squash and lamb's quarters (Chenopodium), but not beans. Cotton and tobacco are not strongly supported at the level of Proto-Muskogean. On the other hand, there is a strong set that includes ballcourt, ball, pole, to win, and whoop, and for Southwestern Muskogean (Choctaw-Chickasaw plus Alabama-Koasati which in Haas' model would reconstruct to Proto-Muskogean), conjure (in the context of ball games), and stickball stick. Other Proto-Muskogean reconstructions include several basket terms (with associated technology), terms for clothing and ornamentation, food preparation (hearth, kettle, mortar, pestle), and weaponry (arrow, warrior, blowgun dart)

as well as magic, medicine, doctor and sacred. Broadwell's brief analysis would place agriculture (corn, squash, *Chenopodium*) in the Proto-Muskogean phase (500 BC), with tobacco introduced around 1 BC-1 AD and beans coming in much later, about 1000 AD (Broadwell 1992:7). His findings suggest that a systematic review of biological terminologies, coupled with guides to native usage like Moerman's American Indian Ethnobotany Database (<http://www.umd.umich.edu/cgi-bin/herb/>), a searchable database of information on Native American plant usage, could yield even more significant results.

Mochon's (1972) pioneer study is based on much less Muskogean data than that of Broadwell, but agrees in general with Broadwell's analysis. In addition, Mochon provides data and analyses suggesting that Muskogean is a much better candidate for association with Mississippian culture than is the Siouan family.

Non-native Vocabulary

Studies of non-native vocabulary have, for the most part, been limited to loanwords from European languages into Southeastern languages, rather than internal loans, which are much more difficult to identify. Haas (1947) addresses the presence of French loans into Tunica, but attempts no cultural analysis. However, the entire set of loans is: to eat breakfast, to dine, to eat supper; coffee; to knit, to ring; dime (from dix sous), Saturday, Chinese (ceramics), and cat.

Brown (1998) treats Spanish loanwords in languages of the Southeastern United States, but adds notes on French loans as well. His analysis of twenty Spanish loanwords and their distributions shows the expected correlation of number of loans with proximity to Spanish colonies, but it also suggests diffusion routes for these words. Brown notes that many of the loanword distributions will scale (Brown 1998: 151, Fig. 2), so that the loanwords found in Koasati, for example, are a subset of the loans found in Creek, loans in Alabama are a subset of those in Koasati, and so on. The suggested route of diffusion is Spanish to Creek, Creek to Koasati, Koasati to Alabama, Alabama to Choctaw, Choctaw to Mobilian Jargon, Mobilian to Biloxi, and Biloxi to Tunica (Brown 1998:153). Furthermore, shorter routes suggested include Spanish-Creek-Mikasuki-Seminole, and Chickasaw to Choctaw. French loanwords are more limited in distribution, being concentrated in the western Muskogean languages. An important element in the spread of a loan is its incorporation into Mobilian, a trade language widely used across the coastal Southeast.

Apart from lexical borrowing there may be other kinds of diffusion to be discovered in the grammars of Southeastern languages, including Muskogean languages. An interesting possibility is suggested by the distribution of gender-marked speech. Mary Haas (1944) documented "men's and women's speech" in Koasati, where the forms of words as spoken by men and women differ notably. The Koasati word for 'he is saying' is /ka:/ for women and /ka:s/ for men. Most of the differences can be attributed to male speech adding a /-s/ to the form, with subsequent adjustments in preceding consonants and vowels. Having discovered this pattern in Koasati, Haas went on to find evidence of such a pattern in earlier forms of Creek and Hitchiti, and slightly different patterns of

gender-marked speech in Tunica and Biloxi (and other unnamed Siouan languages). She also noted that "Carib has become almost the classical example of sex differences in speech" (Haas 1944). What is intriguing about this distribution is that it may reflect the long-distance trade route suggested by Granberry (1995) in his analysis of the similarities between Tunica and Calusa. The putative water-based trade network would link Tunica, Biloxi, Apalachee, and Calusa with the Caribbean; overland routes from the Apalachee could have impacted Creek, Hitchiti and Koasati.

Semantic Reconstruction

Few if any semantic domains have been subjected to systematic reconstruction, although the publication of extensive lexical data in recent dictionaries provides ample material for such treatment. Kinship terminology offers such a domain, but the reconstruction might be trivial, since the attested systems are matrilineal in origin if not in fact (Eggan 1966), making Proto-Muskogean kinship most likely a matrilineal system as well. Ethnobotanical terminology might provide a much more interesting domain, but folk taxonomic relationships within modern terminologies, while implied by translations and cross references, have not been made explicit by direct investigation.

On the other hand, the published data on ethnobotanical terminology lends itself readily to analysis in terms of the evolutionary theories of Berlin (1972). Berlin suggests that the specific patterns of compound and complex noun formation within this terminology result from patterns of horizontal and vertical expansion of the taxonomy, and reflect the taxonomic structure of the domain. The basic (and oldest) terms refer to "generic" level taxa (corresponding roughly to the genera of scientific classifications): 'oak', 'pine', etc. These are expanded horizontally by adding modifiers ('red', 'white', etc), and ultimately vertical hierarchy appears when the generic term becomes a cover term for all the modified types ('oak' includes 'white oak', 'red oak', etc.). A fully developed folk taxonomy has a "unique beginner" ('plant'), a series of as many as a dozen "life forms" ('tree', 'vine'), "intermediate taxa" ('hardwoods', 'conifers'), "generic taxa" ('oak', 'pine'), "specific taxa" ('white oak', 'red oak'), and, for cultivated or culturally significant plants, "varietal taxa" ('Southern white oak').

A pair of examples may serve to illustrate the possibilities for productive comparative analysis. The Chickasaw dictionary of Munro and Wilmond (1994) suggests the possibilities for inferring the taxonomic structure of the domain from its terminology. Sets of terms like the following can be assumed to have a certain taxonomic structure. The first, headed by /ahi/ 'potato (in general)', includes at least three subclasses (red, white, and sweet), and at least one of these is further subdivided. 'Bean' terms suggest a similar structure.

ahi'	potato
ahi' homma'	red potatoes
ahi' tohbi	white potatoes
ahi' lhobowa	Irish potatoes
ahi' lhobowa' champoli'	sweet potatoes

ahi'a:lhlhi'	light-skinned sweet potato
ahi' champoli'	yam, sweet potato (any number of varieties)
bala'	beans, peas
bala' falaa'	peas, black-eyed peas, pole beans, crowder peas
bala' falaa' ishkin losa'	black-eyed beans
bala' falaa' ittitikili'	crowder peas
bala' tohbi'	navy beans, northern white beans, speckled beans
bala' tohbi' ishto'	lima beans
bala' tohbi' sawa'	field peas

Internal analysis of such vocabulary sets (which are much more extensive than is indicated here) gives evidence of taxonomic structuring. Comparative analysis of such sets across the languages can yield chronological information (as noted by Broadwell, above). At least in theory the semantic structuring of the domain can be reconstructed for any proto-language adequately represented by daughter languages. Here, we can note simply that the Chickasaw 'potato' term has cognates in Alabama (aha 'sweet potato', aha taksi 'Irish potato'; Sylestine *et al.* 1993:22-23, 597) and Mikasuki (a:hi: 'tuber, enlarged root'; Sturtevant 1954: 437). The Mikasuki term is a cover term which includes various tubers, among them cultivated taro, elephant-ear, sweet potato, and yam (Sturtevant 1954:438-439), implying that the precolumbian term referred to tubers other than the (introduced) potato. On the other hand, the 'bean' terms are not cognate across these same languages. While each language has similar subdivisions of this plant class, the Alabama term corresponding to Chickasaw bala' is chastoki and the Mikasuki term is sala:l-, indicating the late introduction of this cultigen (as Broadwell noted in his 1992 paper).

This area constitutes one of the most promising areas for future research, since most of the data needed are recorded in dictionaries, and there are extensive modern dictionaries. While native taxonomies are only hinted at, there is ample material for structural lexical studies in the modern dictionaries, which document the vocabulary of at least one language from each branch of Muskogean, and many of the other Southeastern languages: Chickasaw (Munro and Willmond 1994), Alabama (Sylestine, Hardy and Montler 1993), Koasati (Kimball 1994), Apalachee (Kimball 1988), Muskogee (Loughridge and Hoge 1914, Sturtevant 1954: 436-518 on plants), Tunica (Haas 1953), Timucua (Granberry 1993), and Mobilian (Drechsel 1996).

Archaeological Correlations

While much more work remains to be done in this area, some points have already been suggested. The archaeologically attested cultural boundary that runs north from Mobile Bay up the Black Warrior River appears to correlate with the roughly contemporary division of Muskogean into two branches, one east and one west of this line (according to the Haas model). Linguistic reconstructions suggest Muskogean may have played a major role in the diffusion of Mississippian culture. These are hardly startling

conclusions. Nonetheless, future work on the steadily increasing linguistic materials available may some day pay off in new insights.

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- [Figure 2.](#) Algic Languages (Algonkian-Ritwan).
- [Figure 3.](#) The Diversification of Iroquoian Languages (Lounsbury 1961, Mithun 1981).
- [Figure 4.](#) The Diversification of Siouan Languages.
- [Figure 5.](#) The Diversification of Caddoan Languages (Hollow and Parks, 1980).
- [Figure 6.](#) The Languages of the Lower Mississippi River. Detail from Swanton (1952: Map 5). Note that all the language names within the dotted lines surrounding "Tunica" and "Natchez" are varieties of those two languages.
- [Figure 7.](#) The Languages of Peninsular Florida. Detail from Swanton (1952: Map 5). Note that Osochi, Yustaga, Utina, Ocale, and all other language names between the dotted lines are varieties of Timucua. All language names south of the dotted lines are varieties of Calusa.
- [Figure 8.](#) Comparative Chronologies for Southeastern Language Families. Lines indicate time-depth from proto-languages to modern attestations. Cultural reconstructions are theoretically possible at the level of proto-languages.
- [Figure 9.](#) Muskogean isoglosses (Haas 1941).

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