



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

THE TIMUCUA LANGUAGE.

BY ALBERT S. GATSCHET.

(Read before the American Philosophical Society, April 6, 1877.)

The science of linguistics, glottics, or as it was at first called, of comparative philology, is of very recent date. Classical antiquity ignored it and it became a science only through the introduction of Sanscrit into the circle of those time-honored languages, of which the study was considered of importance. Modern geography, history, archæology and ethnology then availed themselves conscientiously and with signal success of this new help. One of the greatest triumphs obtained by linguistics is the disclosure of the primordial social state of the Semitic race and of our remotest Indo-European ancestors. Undoubtedly the antiquity of the two American continents could be disclosed by zealous scientists in the same manner, that is, by comparative researches on their languages, if reliable material is previously collected to a sufficient amount, so that the linguist can light his torch and proceed smoothly along the ethnological pathway of inquiry.

To similar researches I intend to furnish a small contribution by publishing some notices on the Timucua language, which is perhaps that idiom spoken within the present boundary of the Union in which the oldest writings of some extent have been published. As a nation, the Floridian Timucuas are now extinct, but their idiom is preserved in a shape which promises the possibility of its total restoration.

HISTORICAL AND ETHNOLOGICAL REMARKS.

At the time of its discovery the Floridian peninsula was inhabited by four principal and a number of minor nations, engaged in continual warfare among themselves. The Apalaches dwelt from the Suwannee River down to Tampa Bay; the southwestern coast was held by the ferocious Colusas, the southeastern parts and the Bahama Islands by the Tegestas, while nations speaking Timucua dialects extended from the neighborhood of Cape Cañaveral to the mouth of St. John's River and occupied many regions of the interior.

To avoid errors we must carefully distinguish between the three areas of territory to which the name Timucua is at present applied.

First, we have the area of the original Timucua tribe and of its dialect, around San Augustine. It is called by the early writers "Provincia timu-quana."

Secondly, we have the area of a commonwealth of vassal-chiefs centralized under one monarch, of which the above Timucua tribe formed a portion, and was probably its most powerful part. For want of another historical or more comprehensive name this oligarchic commonwealth or monarchy was called by the same name of Timucua.

Thirdly, we have the area of the *language stock*, to which the dialect of the Timucua tribe belonged. This area has probably extended far beyond

the limits of the Timucua monarchy, but at the present time it is not possible to state its domain even by a rough approximation.

The name is written by the Spanish chroniclers Timagoa, Timuca, Timucua, Timuaca; by French authors Thimagona; by the English Tomoco, Atimuca, and contains the word *atimoqua*, which occurs in Pareja's books, f. i. in the Confessionario, on page 205, meaning *lord, ruler*.

In the sixteenth century the native population of northeastern Florida was governed by small chiefs, each of them ruling with absolute power over one or a few settlements laid out in the shape of corrals. These diminutive princes (or *olata, holata*) depended from a monarch in the same manner as the vassals of mediæval times depended of their suzerain or liege lord. To judge from the numerous revolts against their supremacy, the rule of the Timucua suzerain must have been rather despotic and arbitrary. His title was Paracussi, and, when spoken of in his quality as war-chief, Urriparacussi, *urri* or *iri* meaning war. His residence on Lake George seems to have been stationary; the name given for it by the chroniclers, *Utina* or *Utinama*, simply means "my country," and when used for the King himself it is abbreviated from *Paracussi Utina*.

We are informed by Barcia (*Ensayo*, page 48) that at the time of René Laudonnière's expedition, in 1564, forty vassal-chiefs obeyed the commands of this ruler. The tribe or province of the Timagoa was then governed by the Cacique Mollave, and the natives represented his territory to be rich in precious metals. Mollave was the vassal of a mighty king, of whose real name we are not apprized, though his title is given as *Olata Otina*, in Spanish "Señor de muchos Señores." This monarch wielded his sceptre over forty sub-chiefs, and the names of the most powerful of them are given as Chadeca, Chililo, Echonobio, Enacapen, Calanio, Anachatagua, Uvitaque, Aqueya, Mocoço. A chief named Potano-u was then rebelling against the Olata Otina, who was himself warring against another monarch, Soturiba, the commander of thirty caciques or sub-chiefs, and was forced by him to a disastrous and sudden retreat.

The following local names were collected from various sources and though I cannot vouch for the correctness of their orthography, I believe all of them contain words from the Timucua language: *Itava, Potano, Chotupaha, Caliquen, Napetuca, Hapaluya, Axible (Ausile), Salamototo, Ajohica, Tarahica, Alachua (Lachua)*; and two river names: *Aquila* (reed, vine), *Ajano hibita chirico* (river of small acorns). Father Fr. Pareja quotes the provinces of *Mocama, Itafi, Timucua, Potano* and the "*Fresh-water-District*." The westernmost town of the Timucua on the border of the Apalache country is given as *Asibe*, the easternmost of the Apalaches being *Ibitachuco*.

While it is difficult or impossible for topographers of our time to locate on our present maps most of the Floridian places mentioned in the sixteenth and seventeenth centuries, it is on the other side apparent that many local names surviving at the present time are of Indian origin, and that after obtaining a sufficient knowledge of the Timucua tongue we will be

enabled to trace the outlines of its ancient area through a careful analysis of these geographical terms.

Like the other Floridians, the Timucua were a people of large bodily proportions, lighter complexioned in the North, darker in the South, but exhibiting throughout that peculiar admixture to their cinnamon hue, which is called *olivâtre* by the French. For their subsistence they did not rely merely on the abundance of fish, eels and turtles, which peopled their rivers, ponds and lakes, but they also sowed the fields and hunted all sorts of game. Like other Indians they were addicted to polygamy, gross sensuality, sorcery and other superstitious practices, of which Pareja's books afford many curious examples. The population was divided in two portions, separated from each other in the strictest manner; the *nobility*, all of whose numerous pedigrees traced their origin to the sacred persons of the actual monarch or his predecessors, and the *common people*, which also preserved with piety the memory of its ancestors by long genealogical registers. No doubt an aristocratic spirit pervaded the civil and political institutions of these tribes, and if from this we are allowed to draw any conclusion referring to their antiquity, it would tend towards establishing a very protracted residence of the Timucua in these same regions, where the European explorers discovered them, and a comparative isolation and non-intercourse with surrounding nations.

For further ethnological information I refer to Dr. Dan. G. Brinton's "Notes on the Floridian Peninsula, its literary history, Indian tribes and antiquities, Phila. 1859," as well as to the writers on the ancient history of the country, as Basanier, Barcia, Bristock, Fontanedo, Herrera, Roberts, etc., and to the three chroniclers of the illustrious expedition of Hernando de Soto (1539—1543).

Only two writers are known to have composed books in the Timucua language; the priest Gregorio de Monilla (of Mobile?) whose *Doctrina Christiana* is probably lost now, and the Franciscan Padre Francesco Pareja. Born at Auñon, in the Spanish diocese of Toledo, Pareja was with eleven other priests commissioned to Florida by the "Royal Council of the Indies," arrived there in 1594, converted many of the natives and founded the monastery (*custodia*) of Franciscans at St. Helena, 12 leagues North of San Augustine. In 1610 he removed to the city of Mexico, wrote a series of books, all of which were printed in Mexico, and died there January 25, 1628. Of his *Grammar (Arte)* and *Dictionary (Bocabulario)* of the Timucua and of some minor religious tracts in this language no copy is known to exist at present in any library, though some may turn up some time in Spain or in the Mexican States. I derived my information from two original Catechisms, bound in one volume, and from a *Confessionario* of Pareja, printed 1612 and 1613 in 16mo. and brought from Spain to New York by Mr. Buckingham Smith, once Secretary of the American Legation at the Court of Madrid. So careless and unreliable is the orthography of these texts and of the Spanish version standing opposite, that doubts arise whether Pareja himself, who, according to Hervas, lived at Mexico when

his writings were printed there, corrected and revised the proof sheets. The Spanish version is neither verbal nor faithful, often half, often twice as long as the Timucua text, and very frequently misleads the studious reader. Hence the utmost caution must be used in making researches on the idiom.

In spite of all these imperfections, Pareja's volumes are the most precious relics of Floridian antiquity. The texts often make two vocables out of one, or erroneously combine two distinct ones into one; but soon the student becomes accustomed to this caprice and enabled to righten the orthography himself. The books and titles are minutely described by Mr. B. Smith in *New York Historical Magazine*, 1858 and 1860, and on page 3, of the volume of 1858 he gives also some eighty Timucua words, mainly from the *Confessionario*, with their meanings. For the correctness of some of them I am unable to vouch. The *Tinqua* language mentioned by Ludewig (*Literature of Am. L.*), is a blunder, instead of the correct form *Timuqua*.

PHONETIC ELEMENTS.

Timucua syllables are composed from single phonetic elements with remarkable simplicity. They either consist of a vowel only or more generally of a consonant followed by a vowel, and syllables terminating in an *s*, a nasal or other consonant are of rare occurrence (*hibuasta*, *manitu*). The language has a quite numerous and complete series of sounds, and since Pareja does not use any diacritical marks on his Spanish letters, we might infer that it had about as many sounds as the Spanish alphabet, omitting the *ll*, *x*, *z* and *j*. *D* and *g* are scarce and of diphthongs none existed, excepting perhaps *au*. The *h* probably remained silent in most words where we find it, and stands there only to indicate hiatus of two vowels: *lehaue* for *le-ave*, *böhono* for *bo-ono*, and was equally silent at the beginning of words: *habosota*; *hachibono* (frequently written *achibono*). There was only one palatal *ch* (our *tch*) standing either for *tch* or for the softer *dsh*. *Qu* or *q* is our *k*; the *gu* or English *w*, so frequently occurring in Indian languages transcribed by Spaniards, does not occur here. Unfortunately the "*Arte*" of Pareja, which alone could inform us of his mode of transliteration authentically, is lost, perhaps forever, but from what we have we may safely conclude that no clicks, very rough guttural sounds or jaw-breaking clusters of consonants entered into the structure of this remarkably sonorous idiom, which possessed the following twenty-one articulations:

Vowels: u, o, a, e, i.

Consonants: k, g, t, d, p, b, tch, f, h, y, s, v, m, n, r, l.

In vocalism the nearest approximation to Timucua is made by some Polynesian tongues, f. i., that of the Sandwich Islands, by the *Matlaltzinca* or *Pirinda* of Michoacan and by the *Tonto*, spoken on middle Gila River, Arizona. Perhaps one-third of all words begin with vowels. The most frequent initial consonants are k, n, m, p. R and some other consonants do not begin any words, and it is somewhat doubtful if this r is our rolling

r, for this sound is extremely rare in Indian languages.* Our *sh* and *th* are wanting, but the *f*, not frequent in America, occurs here and in the Cháhta-Máskoki dialects, while Apalache shows no trace of it. (See specimen of this language in *Historical Magazine of New York*, 1860, page 40.) Very few instances occur, where a consonant is geminated (*ulipassu*), but with vowels this is very common. The surd pronunciation of a vowel is not distinguished in the texts from the clear and nasal one, but it is natural to assume that some of the *e*'s were what the French call *e muets*. Nasalizing is sometimes indicated by a final *u*.

The interchangeability of a class of consonants observed through all America is found also in Timucua and it would be singular indeed if we did not discover it in this peninsular idiom. The cause of this phenomenon must be sought for rather in the capacities of the auditory organ than in the structure of the vocal tube, we think. The following alternative processes are observed :

<i>b</i> and <i>v</i> ,	<i>mobicho</i> , <i>movicho</i> ; <i>balu</i> , <i>valu</i> .
<i>b</i> and <i>m</i> ,	<i>hachibueno</i> , <i>hachinueno</i> .
<i>h</i> and <i>f</i> ,	<i>iníhi</i> , <i>inífi</i> .
<i>l</i> and <i>r</i> ,	<i>oyolano</i> , <i>oyorano</i> ; <i>tchiri</i> , <i>tchale</i> .
<i>t</i> and <i>d</i> ,	<i>mantá</i> , <i>mandá</i> .

Alternating vowels :

<i>ue</i> and <i>o</i>	<i>hachibueno</i> , <i>hachibono</i> .
------------------------	--

Pareja does not mark but exceptionally the emphasized syllable of a word, but we can safely assume that the accent rested on the radical syllable in words of three or less syllables, and that many particles were added *enclitically* to the words governing them. The elision of unaccented vowels occurs at times and then causes two consonants to follow each other.

INFLECTION.

Timucua incorporates particles of relation to a large extent and has also reached a considerably high degree of polysynthetism. The differentiation between verb and noun is not so thorough as in the Indo-European tongues, and we find that many particles of relation occur in both classes of words. These latter particles are *suffixed* to the radical syllable and prefixes are seldom found. Duplication of the root or of any other syllable is a rather uncommon means of grammatical synthesis, neither is it of frequent use in any of the eastern languages of North America.

The noun is inflected by means of postpositions and case-suffixes. The locative case is expressed by *-mi* : *pahami*, in the house, sometimes by *-la* : *acotala*, in the bed, or by *-ma* : *mocama*, in the sea. But this particle *-ma* is used to express the most diverse relations of the noun and also of the verb ; it does not only form plurals of substantives, but also possessive, dative, objective and other cases, and thus seems to be comparable in some respects

* Is it the sound *kh*, the Greek χ , which Spanish grammars of American languages render so often by R?

to the ubiquitous article-pronoun of the Cháhta language. Frequently other postpositions are placed between *-ma* and the word-stem, or after *-ma* as final syllables.

Other postpositions frequently occurring in the Timucua noun are : *-co*, *-coco*, *-ke*, *-la*, *-le*, *-leta*, *-leke* (*-leqe*), *-ni*, *-no*, *-si*, *-so*, *-ta*, *-te*, *-ti*, etc.

The demonstrative particle *na* is employed in many different ways. When placed before the noun, it serves as a definite article ; when suffixed to it is the possessive pronoun "*my, mine.*" Owing to the indistinct pronunciation of unaccented vowels, which we observe sometimes in Pareja's texts, *na* appears also under the shape of *ne*, *nu* ; *na* enters into the composition of the pronoun *uno*, "somebody, something, some one, one." *Ni* in *ni sikisama* means "*me*;" these words signify *my father*, and a literal translation would render them by "the one, who procreated me." *Ki* is here the radical syllable. In his Catechism, page 18, Pareja gives the series of ordinal numbers which unfortunately runs no further than to seven : *Na* is prefixed to each of them as the definite article, and the ending *-mima* is the possessive pronoun of the third person singular : *his, her, its*.

Cardinals :

mine 1
yucha 2
hapu 3
cheketa 4
marua 5
mareka 6
pikicha 7
piqinahu 8
peqecheqeta 9
tuma 10
yahagala 11
iuchaagala 12
hapuangala 13
chequetangala 14
ero tuma yucho 21
tuma hapu 30
tumacheqetama 40
itumacheqetoqe marua 45
ero chupiaco iuchaagala 12,000

Ordinals :

minecotamano, kibema
na yuchamima
na hapumima
na cheketamima
na maruamima
na marekamima
na pikichamima
na piqinalumima
na peqecheqetamima
na tumamima

In this series many terms are ending in *-a* ; four is formed from two, *cha*, *che* appearing in both, and *ke* in "four" being an additive particle "together." We cannot decide as yet if the series is based on the quinary or simply on the decimal system of counting.

We often find appended to nouns, especially to substantives borrowed from the Spanish, the suffix *-mueno*, *-m'no*. *Mueno* means "the name," or "to name, to call" and composes terms like *muenote* is called, *hachibuena*, *hachimueno* "which thing? which? what?" (literally : which

name?) In the Spanish word *fémone* it means : the *so called* faith, in *gato-mano* the *so called* cat.

The termination *-male* serves to designate two members of a family equidistant in their relationship or consanguinity, f. i., father and son, grand-grand-father and grand-grand-child etc. The former two are called *itimale*, the latter *murumale* ; but if the grand-grand son is mentioned before the grand-grand-father, another term, *kisitomale*, will be employed. Uncle and nephew is *itelemale*, nephew and uncle, however, are called *kiemale*. It will be difficult to find any other language on the face of the globe, even in America, where the degrees of relationship are distinguished with such extreme accuracy.

In a community with so aristocratic forms as that of the Timucua we must expect to meet with a number of *reverential* endings appended to nouns and verbs, which were used in addressing persons who commanded respect through their position : kings, chiefs, governors, parents, friends, matrons, etc. They are extremely frequent in the idioms of the Mexican States.

A demonstrative pronoun *caki* occurs in very different forms (*ca*, *cage*, *caqui*, etc.), and answers to our *that* and to the personal pronoun *he*, *she*, *it*. Connected with the prefix *o* it occurs as *oque*, *oqe*, and its plural forms are *care*, *carema*, *oquere*, *oquare*. Etymologically connected with it is the demonstrative particle *-co*, frequently redoubled to *coco* and appended to substantives and adjectives. *Acu*, *ico* means every one, all ; *ano paracusi olata ico*, lit. "one king of all chiefs," was the official title of the Timucua monarch or head-centre.

When standing at the end of the sentence, as in questions, "thou" is expressed by *cho*, otherwise by *chi*, and in locutions like *chi isucu?* are you a herb-doctor? it replaces at the same time our substantive verb *to be*, of which all American languages are deficient. *Itimi isomikene chi nahe?* Have you father and mother? *Anoco orobasobi cho?* Did you bewitch anybody? The former sentence shows the use of the postposition *ke*, which in fact answers to our "and," but really signifies "together, along with," thus fulfilling the function of one of our prepositions.

The interrogative pronoun or particle who? what? which? *cha?* *acha?* *hacha?* appears chiefly in compounds, formed with different parts of speech. Most frequently the particle *ke* just spoken of is connected with it.

- hacha chi mueno? which is thy name?
- chanco (contracted from chanaco)? whence? wherefrom?
- hachamueno (see *supra*).
- hachakene? which? and which? and what?
- hachakenenco, hachakenike? and why?
- hachakenta, hachakentana? how? how then? and how?
in which manner?

Verbs are derived in various ways from substantives, adjectives, or from other verbs. Some of the principal derivational endings, particles or forms are as follows :

-*lehaue* forms causative verbs : *ituhu* to pray over, enchant, bewitch : *ituhu-lehaue mobi cho?* Did you order (the sorcerer) to pray over (something)?

-*letahaue* involves the idea of duty, or obligation : *bohono-letahaue* must be believed ; *yaleno-letahaue* must be observed.

-*so*, *sota*, *sote* intensify the meaning of the transitive verbal base to which they are appended and also form causative verbs : *ituhusobi cho?* did you really bewitch?

-*manta* means to desire, wish for ; incorporated into verbs it forms *desiderativa*.

Full paradigms of the verb cannot be given yet, but such elements of verbal conjugation which seem to be recurring in most verbs, are, when applied to the verb *mo*, to speak :

ni mola I speak.
chi mo thou speakest.
oque mo he, she speaks.
ocare moke they speak.
chi mobi thou didst speak.
momate speaking.

The particle or sign of the preterit is *-bi*, *-vi*.

Some personal pronouns used here are similar in form to the possessives, which are not prefixed, but constantly suffixed to nouns :

itina my father.
itaye thy father.
itimima his, her father.
itinica our father.
itayake your father.
itimitilama their father.

To this table must be added a variety of inclusive, exclusive and dual forms for the first person of the plural :

our father : *itinicale*, *itinicano*, *itimile*, *heca itimile*, *heca itinica*.

Adjectives, when used in an attributive and not in a predicative sense, are placed after the substantive which they qualify. The direct and the indirect object of the verb is very frequently placed at the head of the sentence.

SELECTED TEXTS.

To enable students of American languages to judge for themselves of the nature of Timucua, I insert a series of texts which I have taken from the most interesting parts, linguistically and ethnologically considered, of those writings of Pareja which I have had the good fortune to consult. To one series of questions I add the Spanish version of the original, to the others the English translation of the Spanish version.

For the old-fashioned, initial *y* of the Spanish and Timucua text I have substituted the *i*, to which it is equivalent.

Terms of kinship and genealogies.

Pareja gives several series of terms used in his time for *the pedigrees and castes* of the nobility and the people, which evidently are of totemic origin ;

of terms for the degrees of *relationship* by consanguinity and by marriage, some of them used by men, others by women only, or by both sexes indiscriminately. The following is the most interesting of these pieces from a purely *linguistic* standpoint and I give it in the original Spanish. These terms were used by *both* sexes, as Pareja remarks.

(From the first Catechism ; pages not numbered.)

Los que son naturales, ó de una tierra, *Uti nocoromale*. Los que son de un pueblo *Hica nocoromale*. Los que son de una casa *Paha nocoromale*. Somos de un pueblo *Hica nichobale*, ó : Somos de una casa todos *Hica nicorobale*, *paha nicoralebale*. Somos de un linaje, ó casta, ó generacion *Anoquela niyahobale*. Sois de un linaje, ó generacion, ó estirpe *Anoquela chiyahobale*. Son de un linaje, ó casta, ó generacion *Anoquela yahomale*. De que linaje eres? *Anoquela chichaque ne?* Quienes son tus parientes, ó parientas? *ano chichaquene chitaco chiano mi?* ó : *chitaco anoya?* Parientes y parientas, y hermanos y hermanas se dicen entre si : *Ano virona*, ó : *elapachana*. Hermanos, hermanas, parientes y parientas se dicen *Anoniamale*, ó : *elapachamale*; *Etapacha* es : comun parentesco : y estos tambien son comunes : *Anomalema*, ó : *ano oquomi*, ó : *ano oquo malema*. Viudo, viuda : *ubua*, llamado por *sus* parientes ó parientas solamente.

Todos los que descendientes de los linajes que se tienen por parientes se llaman todos estos descendientes, *ocorotasiqino*. Pero todos los que descendien de un linaje, y parentela, se llaman *sigita pahana*. Y esta descendencia ha de ser por linea de varon ; por que si es por linea de muger, se llaman *anoquelama* ó *Anona* ; parentesco de lejos *ucucanimi*. Amo, señor y basallo, esclavo ; y amo y esclava ; y amo y criado y criada : *Anoromalema*, Amo y criado, y amo y basallo : *Anoquelamalema* ó : *anopequata-male*. Señor y esclavo ; y esclava y esclavo ; y esclava y señor : *Atemalema*. De modo que si se pone primero el amo diremos : amo y criado, y si se pone el criado antes quera dezir criado y amo, y assi de todos los demas que quedan dichos, y se hallaren de estos generos.

On the nativity of Christ.

Doctr. Christ. p. 24.

Para que mas se hizo hombre?	Acuyano hachaquenenco bueta caqua taanolebi?
Para que mas se hizo hombre?	Acuyano hachaquene caqua taanolebi?
Pues para que se hizo Dios hombre?	Hachaqueniqe Diosimano caque taanolebi?
Como puede nacer de Madre Virgen?	Isomima aquitasiqe lenima hachaquentana aruquilehe?
Sobrenatural y milagrosamente.	Inino lebima tana inibitileta hiquo timonococoleta hachiti moponta siqitantela ha.
Y su Madre, Sancta Maria, vivió	Mine isomimano, Santa Maria mu-

¿despues siempre Virgen?

enoma, etabualunimate nanemi aquis-
atique cumenu yaqualebi?

Si, perpetuamente fue Virgen.

O, nanemi aquita cumenu yaquia hi-
buabila.

The following interrogatories mainly refer to the SUPERSTITIONS, *vices* and *heathen practices* of the natives, whom the Spanish priests had come to reform and civilize: they are of uncommon interest to the investigator of American ethnology.

Questions addressed to Chiefs and Governors.

(Confessionario, pages 127, 128, 129.)

When intending to join a hunt-
ing party, did you order prayers to
be said over the tobacco beforehand?

Emiso haueleta hinino ituhusobi
cho?

On arriving on the mountain, did
you order to lay the arrows together
and let the conjuror say prayers over
them for your benefit?

Hurima minonomano atuluma ho-
rocoqe naribama ituhuaue mobi cho?

Did you say that the first deer
killed should belong to the con-
jurator?

Honoso nihe qibema itufama ho-
nomi-lehauae mobi cho?

Did you order that over the lake
prayers should be recited before fish-
ing in it?

Camapatama hibinoma ituhu chi-
cage quelano-lehaue mobi cho?

In the same manner, did you or-
der that of the fish caught for the
purpose of eating, the conjuror should
get one-half, after having prayed
over them?

Acuqueleta hiquinomano ituhuso-
ta cuyumono itufama isaqita ohono-
lehaue mobi cho?

The first fish caught did you or-
der prayers to be said over it and then
to throw it into the provision-house
(barbacoa)?

Cuyupona qibema inti uquata itu-
huta oquono-lehauaele mobi cho?

Did you before tilling the field re-
cite the ancient ceremony to the
conjuror?

Pile pulunu-lehauema ituhusuta
hibuata bechata pulubi cho?

Did you [think it sinful not to]
pray over the first maize of the crop?

Tapolabaca qibema ituhusuta
hebi cho?

The first time when the corn-crib
was opened, did you make any flour
for food? and after pounding flour
did you pray over it?

Abopala falino qibema ipita huyo-
sota ituhutaqere hebi cho?

In gathering chestnuts and pal-
metto berries, did you perform with
the laurel and while praying, the ce-
remony which had come out of use
(que solia deshazer)?

Afataco si apuco quenema hebeta
nali qui iribosota ituhusobi cho?

Did you say: "I shall not eat any mountain fruit, unless prayer be offered over it"? Aya honoma ituhunuleqe hehani-manda hanibi cho?

Did you wish to eat any other fruit, over which prayers had been offered first? Calamaqibe ituhunuleqe hehani manibi cho?

From these curious questions directed to the principal men of the tribe, it appears that one of the duties incumbent to a chief was the superintending of the ceremonies of incantation through the conjuror or prophet. Evidently these prayers and ceremonies were intended to consecrate natural objects, which formerly had been profane, for men's use, and at the same time to propitiate the Divinity in favor of those using them.

Questions directed to Rural Laborers.

(Confessionario, page 129 recto).

Did you not eat the first maize of the crop? Hulubota qibinoma inti uquabi cho?

Did you not eat the maize of the newly broken field (de la roça nueva)? Abara elema ecano qibema inti uquabi cho?

When the owl was crying did you believe that it would have mercy on you? Hitiqirima hebuataqe hoba nime-labonihauē mota bohota mosobi cho?

When the woodpeckers sang, did you say you would not utter any cry, because it would cause you to bleed from the nose? Tiniboma hebuataqe iquasetiquan-ichinima isitocobile bohota mocobi cho?

When the owl or red owl was crying, did you say: "Do not interrupt it, for it would cause you mischief?" Atofa hororoquene hebataqe nani-beti, queni intila mobi cho?

In winter time did you [think it sinful to] eat the small partridge (la gallina pequeña)? Caya-ule-i chira na minama inti uquabicho? (words in [] not in Timucua text).

Questions to Hunters.

(Confessionario, page 129).

When a [young] deer was bleating, did you say: "If I do not take any herbs into my nostrils they will be shaken up," and if in this thought you have sneezed and returned home, did you bathe in the juice of the herb? and have you believed that when omitting this you would certainly die? Honoso hebasi, habeleta itorita chininipe lotahauē manda, niyefela tasamota niyena haquista, paha pononamate samota quosobi cho? no-comi nini habela manda bohobi cho?

Did you say or perform any ceremonies for the chase by kicking with the feet (armando la coz), and did you stop eating of the game which you had killed, believing that you would then kill no further game?

Did you forbid that the liver and lungs of the game should be thrown in cold water to cook them, because you could then shoot no further game?

Having pierced the game with arrows without killing it, did you order prayers to be said over an arrow, believing that with the next shot the game would die?

The sauce (caldo) of the game or of the partridge, did you prevent its spilling because the lasso would not catch then any more of them?

(Skipping a few questions on page 130 r. and verso on account of their great length, I continue with page 131 recto).

Did you forbid going up to the corn-crib, unless prayers had been offered for it to the Spirit?

For seeking the turtle and catching it did you pray?

In passing with the canoe a rock ledge (barra ó vaya) and there being a surging of the sea, did you whistle at it for not getting upset?

Did you whistle (or hiss) to the storm, thinking that it would cease then?

When you find yourself in similar distress, call the holy Name of Jesus, and Jesus will help you.

Superstitions concerning warfare.

(Confessionario, page 131 r. and v.)

When it was lightening did you forecast war?

When going to war did you bathe yourself in the juice of certain herbs?

[Know well, my son,] that although you bathe in or rub yourself

Uquestanaye, hachicaresta isota mosobi cho, honoso ilifotanaye, inti-quata hehanano ni ilifohaueti manta bohota mosobi cho?

Chofama pilenoma ibine ichicosa ecaticuani ilifoqi tinibalusihabele mota mosobi cho?

Baliteque atulu nalifochiqe, nihe-tileqe, atuluma ituhusota niyena mosota, naipolotecata mosobi cho?

Neha ichuquininoleqe honosomate, cayamate quenequa uquesinoma uba hauetila manda bohobi cho?

Anomisonoma ituhutetima abopahama iquinole-hamonta inti uquata bohota mobi cho?

Caramaba pilisota hiti hebuanoma ituhuta quosobi cho?

Ibi abagalata nayeno ticoma piluabe tileqe ibinaqe elota piluhauetila manda bohota elofibi cho?

Aquetqe elotequahaniso hale manda bohota elosibi cho?

Naquentaqe entahanaye Jesus motabisato tachiqe chi ibalu haele chilarahae quenela.

Millicotaqe iri nabolotele manda bohota mosobi cho?

Irimi haeleta atulu ni iubue haele niye suquoniqi mobi cho?

Naquostaniye, samota monocotacu Diosima maninco nacu atulu

with this weed, the arrow will nevertheless transfix you if God does not guard you.

chi iubehe yanacu maha suquonina
ticotacu Diosi manineco nacu atulu
chi yubeheti quenela.

Questions addressed to women.

(Confessionario, page 132 v. 133 r.)

Did you eat any fish or deer-meat during the catamenia?

A short time after confinement did you eat fish or such things?

Shortly after the confinement did you make a new fire (candela)? Did you make any during the catamenia?

Anointing your own hair with bears' grease (azeye de oso) did you think it sinful to eat fish for so and so many moons?

Did you eat any coal, dirt, or broken pottery, or fleas or lice?

[Do not eat coal nor dirt nor fragments of pottery, for] they make the person sick, and it is sinful on account of the injury produced.

After your husband had left you, did you bathe in the juice of herbs, thinking that he would then return to you?

Did you say: tinge ye my palm-leaf hat with a certain herb (saumad me el guano con cierta yerba) and he will not desert me?

And having tinged it, did you put on your petticoat?

Did you think that in tinging your hat in that intention somebody would get enamored of you (se aficionará)?

Did you fast in this intention?

And thus you arrived with somebody almost at night time and you performed the ceremony as if for eating and drinking?

I do not pretend to have written all the words of these sentences and of the vocabulary, following hereafter, in a strictly correct manner, but cer-

Ibirita cuyumate honoso henomate
quene inti uquabi cho?

Eta baluta cuyuleqe hachibueno
eyoleqe quenema inti uquabi cho?

Eta baluta taca chale quosobi cho?
Ibirita taca chale cosobi cho?

Ara uque naponaye cuyuhanta
aculhiba meteta minoqe henolebinco.
hehanimota mosobi cho?

Tacachuleheco, qisaleheco, ulipas-
saleheco quenehata, ibiqitaleheco,
hibeleco quenema iparubi cho?

Nacare henomano inti lehe caqua
atenaso, ninoleqe, ano iqilabosobiqe
hecaqua atenasoninoma intele hani
hache.

Inifaye chi haniqe viromaqua ni-
ponosihero manda, niye nisamoso-
no-lehaue mota bohobi cho?

Canima niye ni naquila sinoleqe
utihandle mota bohobi cho?

Caní meleninoma niye naquilano-
lequemeleniqi mobi cho?

Caní abinoma niye namocosono-
leqe abiqiti anoco ni homanisihaue
manda bohota quosobi cho?

Na quostanayeno itoribi cho?

Itoritequa ilaqqe henomate pele-
ta, ibinamate peleta quosobi cho?

tainly more correctly than they are found in the original. A good orthography cannot be established before the idiom is thoroughly understood.

In studying and analyzing the words of Timucua, the same idea obtruded itself to me, which occurs so often to students of the South African and of some Western American languages : “ *Are not all the words, even their radical syllables, built up of pronominal roots?* ”

WORDS AND SENTENCES.

I have placed here in alphabetical order some of the vocables, the meaning of which I have ascertained through careful comparisons of the passages in which they occur. Some of the words which I have mentioned in the grammatical notices, the numerals, f. i., I have omitted in this table.

abo maize, corn-plant.

abopaha corn-crib, Span. garita.

aboto stick, staff; to beat with a stick : anoco abotobi cho? did you beat somebody?

acu all, every; acu caki all this, acu kelata in the same manner, exactly so.

afata chestnut; afataco hebeta for gathering chestnuts.

aha acorn.

apu grape of palmetto, palmetto-berries.

aquita maid, aquitasique virgin, damsel.

ara bear; ara-hasomi those forming the Bear-Pedigree.

aruqui child, descendant.

cuyu-hasomi aroki descendants of the Fish-Pedigree or family of fish;

aruqui-lehe he was born.

atofa owl.

atulu arrow.

balu, valu life; balu nenemi eternal life.

eta baluta after a (recent) confinement.

bohono to believe.

caya chicken, partridge, turkey.

camapata to fish; c. ibinoma to fish in the lake or lagoon.

coro the same; uti nocoromale those belonging to the same country.

cuyu fish.

chebe to lose; hachibueno chebeque, h. chebuamano something lost.

chini nose, nostrils.

chiri small, young. chirico viro boy, son (lit. little man, young man) chirico

nia daughter, both used only by their parents; chirima, amita chirico

my youngest daughter. Related to *chale* new.

chofa liver.

chuca? how many times? (from cha, hacha? who? what? which?)

eke, equela day.

hasomi lineage, pedigree.

caya-hasomi chicken-pedigree.

ara-hasomi Bears' lineage.

hebua, hebuata word, saying; to speak, to emit voice,—hebuataque tiniboma the woodpeckers sing (see: honoso).

nurabuote a lie.

heno to eat; henomate ibinemat for eating and for drinking, chucaya haheno? how often did you eat? hehani manibi cho? did you wish to eat?

hibe louse.

hica settlement, town, village; appears in Tarahica and some other local names mentioned above.

hica nocoromale the citizens of the same town.

hiyaraba American lion.

holaba (also: tapolaba) maize, Indian corn; holabaca qibema ituhubi cho? did you pray over the first-grown maize?

holata chief, holata aco, olata ico: all chiefs.

honoso deer, antelope; honoso hebasi when the deer is bleating.

huta to cohabit; niaco hutabi cho? did you cohabit with a woman?

ibine water; pond, lake, sheet of water.

hibita river.

ibinese to bathe.

inibiti (see below).

hibua to rain. hibubi cho? have you produced rain? did you cause it to rain?

banino rainbow.

ibirita to menstruate.

mucu-bine tears (lit. eye-water).

icasini to altercate, quarrel; anoco icasinibi cho? did you quarrel with some one?

ikeni to kill (probably a contraction from: ike nihi, to make die); anoco ikenibi cho? have you killed anybody?

inibitisote to drink to excess, to fill oneself with liquor; see ibine.

inihi consort, husband or wife. inihimale married couple.

iri war, warfare, irimi haeleta for going to war; iri-hibano war-councilor; this caste were descendants of the Fish-family.

urri-paracusi war-prince.

isa mother.

isu, isota herb, weed; a plant, the juice of which was used for superstitious purposes. Nie chaqueneco isota with which herb?

isucu, herb-doctor.

isucu echa crazed, possessed by a demon.

iti father; itimileno "our father": spiritual father, monk, priest.

ltori late, posterior.

itorimitono the last order of the second pedigree of Timucua nobility.

itori to fast; equelaco maha itorinoma the days of fasting.

ituhu to pray, conjure, invoke, charm, bewitch; ituhusobi cho? did you conjure or bewitch? did you say prayers over something?

itufa sorcerer, wizard, medicine-man.

ya, aya not, no ; in *yalaçota* misuse, abuse it has the meaning of our prefix : *mis-*

kala fruit ; calama kibe the first fruits.

kenele afterwards, subsequently, then.

kibe first ; adv. firstly, at first.

tapolabaca qibema the first maize of the crop ; hulubuta qibinoma the first maize. qibe ituhumuleqe over which a prayer has first been recited.

kie child (used by men) ; kiena moso my first son, my first daughter. ki-ani cocoma my children of later birth. kimale son *and* father.

kisa earth, ground, dirt. qisa iparabui cho? did you eat dirt?

koso to make, produce ; taca chale cosobi cho? did you make a new coal-fire?

lapuste, lapueste to require, ask for.

mani to agree, consent ; anoco nihihero manibi cho? have you wished somebody's death?

manta to desire, wish ; ni mantela I wish, chi mante you wish.

mine prior, preceding, first ; large, great. miso anteceding, older, previous ; ulena miso my child of first birth, eldest child (used by females only).

mo to say, speak ; to order, command. movi cho? mobi cho? hast thou ordered, or said? mote cho? do you consent? do you say so? o, motala! yes, I say so!

mueno, mono name, to name.

muenolete Diosima? is he called God?

hachimueno, hachabueno which thing? thing, object.

visamano name.

na kostenaye? in which manner? through which process? na quostanayeno by what intention?

nayo white ; honoso nayo white deer.

nanemi perpetual, eternal ; adv. always ; balunu nanemi nohohauela to give me eternal life.

nasi son-in-law.

nariba old (of persons). naribama ituhuaue mobi cho? did you order the old sorcerer to say his prayers?

nia woman, female (see pacano).

nihl to die, expire ; honoso nihe qibema the first deer killed.

nocomi true ; nocomicoco manda with true desire ; Dios nocomi bohono. acoma to believe truly in God.

nulasi to tickle.

o yes, yea, certainly.

obacha to kiss.

orobo to advise? orobinibi cho? did you confess (in Church)? anoco orobasobi cho? did you bewitch some one? na orobisionoma advices, counsels.

pacano subsequent, second to.

- nia pacano a spinster; pacanoka my second child (hijo, hija de en medio). viro pacano unmarried man.
- pequata vassal.
- pona to come; ni ponala I come.
- ponachica? do you bring? (see : viro).
- soba meat; deer-meat.
- taca fire; coal-fire; taca chale new coal-fire (candela nueva in Span.); taca chu carbon, charcoal.
- tafi sister-in-law (used by men only); tafimitana, ni tafimitama the brother of my husband (used by women).
- tico canoe, boat; ticopaha ship.
- tinibo woodpecker.
- ulipassa fragments of pottery (uli = Span. olla).
- uti earth, land, country; uti-hasomi those forming the Earth-pedigree or Earth-Family, utina my country; uti nocoromale the inhabitants of ONE country.
- viro man; chiri viro boy, son; viroleqe uquata puenonica, I brought here a male child.

The Approaches to a Theory of the Cause of Magnetic Declination.

BY PERSIFOR FRAZER, JR.

(*Read before the American Philosophical Society, April 6, 1877.*)

So many questions of historical, economical and scientific interest are bound up with the variation of the magnetic needle from the astronomical North, and the change in the rate and sign of this variation, that the following remarks may be excused, even if they only succeed in impressing upon the imagination the immense amount of work which yet remains to be done. The best compendium of the history of the subject is contained in a prize essay on Terrestrial and Cosmical Magnetism by E. Walker, Cambridge (Eng.), 1866, while for particular discussions of special groups of observations, Sabine's *Secular Variations of the Magnetic Needle*, in the *Trans. of the Royal Society* during the last five years; Prof. A. D. Bache's discussion of the magnetic elements, observed at Girard College during the years 1840-45 inclusive; in *Coast Survey Reports* for 1855, 1858, 1859, 1860 and 1862, and especially Mr. C. A. Schott's labors on these and all other obtainable data in the United States, have been mainly drawn upon. Besides these, for general questions relating to the subject, Barlow's treatise in the *Encyclopædia Metropolitana*; Airy's treatise on *Magnetism*, London, 1870; *Numerical Relations of Gravity and Magnetism*, by P. E. Chase, *Trans. A. P. S.* 1864; Prof. Loomis' collection of magnetic observations; *Silliman's Journal*, 1838 to 1840; Reclus, Despretz, Becquerel, Humboldt, "Magnetism," by Sir W.