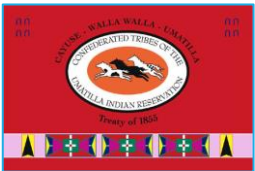


Re-assessing the source language of a purported Kaxwaan (Yuman) word list

Jonathan A. Geary (jonathangeary@email.arizona.edu)

Confederated Tribes of the Umatilla Indian Reservation; University of Arizona

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Introduction

- I analyze the source language of a **Yuman** wordlist collected in 1963.
 - Crawford (1963) originally identified the source language as **Piipaash**.
 - Crawford (1966, 1983) later identified the source language as **Kaxwaan**, and other sources have since repeated this claim (Laylander 1997, Golla 2011).
- Kaxwaan is known through **two wordlists collected in 1921 and 1930**.
 - Kaxwaan continued to be spoken **at least until 1930**, but it is **now dormant**.
 - Crawford's claim **shifts the timing of Kaxwaan's dormancy by a generation**.
- I show that the language in this wordlist exhibits marked linguistic features (lexical, phonological, morpho-syntactic) that **identify it as Piipaash, not Kaxwaan**.

Kaxwaan and the Yuman language family

A brief Kaxwaan historical outline

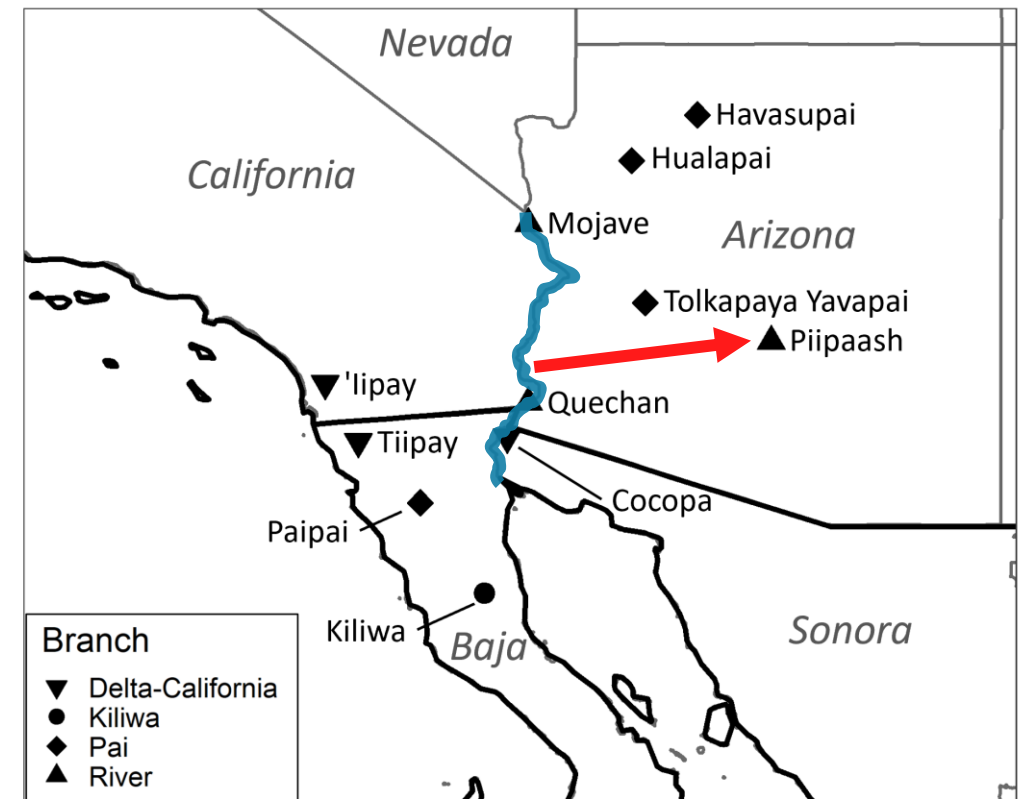
- The **Kaxwaan** are one of five historically distinct Yuman groups that had formerly lived along the lower Colorado River but now comprise the **Piipaash** people (a.k.a. “Maricopa”; Spier 1933, SRPMIC CRD n.d.).
 - The Piipaash, Xalychidom, and Kavelychidom lived **along the Colorado River**, between the Mojave and Quechan.
 - The Kaxwaan and Halyikwamai lived south **at the Colorado River Delta**, near the Cocopa.
 - All five groups were allied with the Cocopa (cf. Piipaash-Cocopa lexical borrowings; Geary 2022).



Map 1. Modern distribution of Yuman languages.

A brief Kaxwaan historical outline

- All five groups gradually abandoned the lower Colorado River and **settled along the Gila and Salt Rivers** near Phoenix, AZ c.1500s-1845 (e.g. Harwell 1979, Spier 1933).
 - The Kaxwaan and Halyikwamai departed the Colorado around 1820 and **settled by 1840**.
- Members of these groups intermarried and assimilated, such that the Gila and Salt River communities today exhibit a more unified **“Piipaash”** identity (e.g. Harwell and Kelly 1983, SRPMIC CRD n.d.).



Map 1. Modern distribution of Yuman languages.

The Yuman language family

- Members of these groups spoke **dialects of two Yuman languages** (Figure 1).
 - **Kaxwaan** (Delta-California Yuman) and **Piipaash** (River) are only **distantly related**.

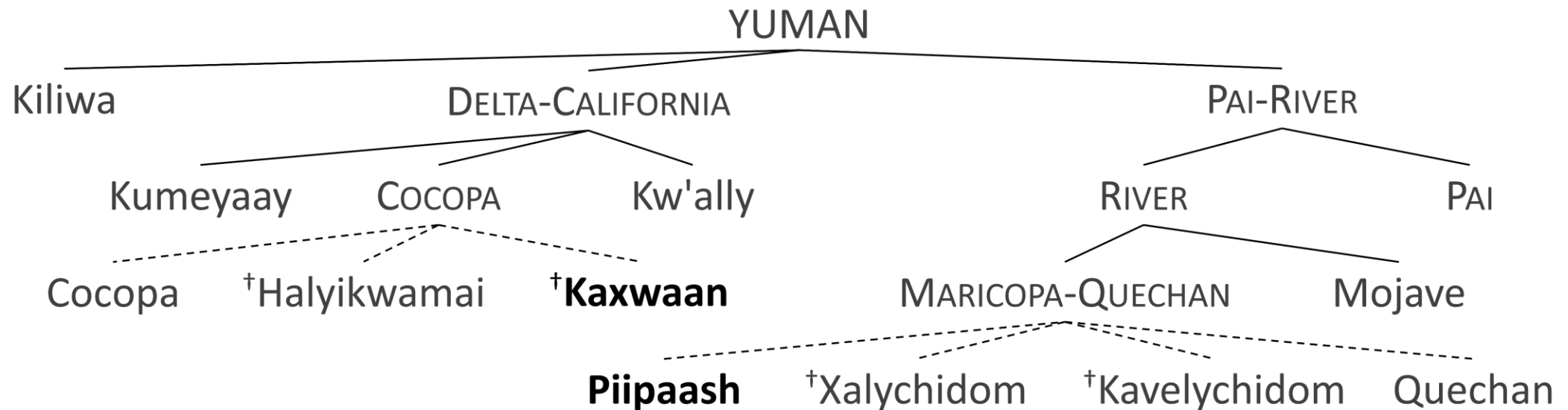


Figure 1. Yuman language family tree, simplified from Kroeber (1943) and Miller (2018). Languages of interest here are in bold. Historical dialects are indicated by dashed lines. † = dormant.

Cocopa, Kaxwaan, and Halyikwamai

- Based on scant Kaxwaan linguistic data and on impressionistic reports of their similarities, linguists identify **Cocopa, Kaxwaan, and Halyikwamai as dialects of the same Delta-California language** (Geary 2021a, Kroeber 1943).
- Cocopa is relatively well-documented (e.g. Crawford 1966, 1983, 1989).
- Kaxwaan is known linguistically through a 220-word wordlist collected by Alfred L. Kroeber in 1930 (analyzed and partly published in Kroeber 1943) and a 50-word list collected by Edward H. Davis in 1921 (analyzed in Geary 2021a).
- There is no known linguistic documentation of Halyikwamai.
 - Kroeber's (1930, 1943:21–22) Kaxwaan consultant reported that Kaxwaan and Halyikwamai were “identical speech” (but this could mean only that they shared cognates; Miller 2018:416).

Kaxwaan language data

- Linguistically, Kaxwaan is known only from **two short wordlists** (c.1920s):
- Davis (1921) – **50-word** list from a 65yo Piipaash-born Kaxwaan woman.
 - Davis was a photographer who lacked linguistic training and adapted English spelling conventions to transcribe Kaxwaan speech (e.g. “u” = [a], “lsch” = [ʃ]).
- Kroeber (1930) – **220-word** list from old, migration-born Kaxwaan woman.
 - Kroeber (1943) published less than half of this list in his classificatory analysis.
- Geary (2021a) analyzed these lists and showed that the Kaxwaan of the 1920s exhibits **minimal evidence of borrowing/influence from Piipaash**.
 - Kaxwaan continued to be spoken at least into 1930, but it is now dormant.

Kaxwaan language data – A third wordlist?

- In 1963, James M. Crawford collected **~540 words and sentences** from a Piipaash woman who was born near Gila River in 1892 (initials: “JY”).
- In his original fieldnotes, Crawford identified JY as a speaker of **Piipaash**.
- Crawford (1966:3–4, 1983:567) subsequently identified JY as a speaker of **Kaxwaan**, writing that “[n]o significant difference is apparent between Cocopa and [Kaxwaan] in either my list or Kroeber’s” (1966:4).
- More recent sources have repeated this claim (Laylander 1997:9, Golla 2011:120), asserting that Kaxwaan continued to be spoken **at least into the 1960s**.
 - Crawford (1966:4) and Laylander (1997:9) identify JY as “the last [Kaxwaan]”.

Kaxwaan language data – A third wordlist?

- If it were true that JY was a Kaxwaan speaker, then **this wordlist would represent a significant document in the linguistic study of Kaxwaan.**
 - Crawford (1963) is **longer** than Davis (1921) and Kroeber (1943) combined, and neither of those resources contain any **Kaxwaan sentences.**
 - This would shift the timing of Kaxwaan's dormancy by **at least a generation.**
- I find the shift in Crawford's identification of this language suspicious.....
 - Crawford (1966, 1983) does not acknowledge this shift in identification.....
 - I have worked with Davis (1921) and Kroeber (1930), as well as Crawford (1963) as a Piipaash wordlist; I have never had reason to doubt this identification.....
- **I compare Crawford (1963) with Piipaash, Kaxwaan, and Cocopa data.....**

Comparison of Crawford (1963) with Piipaash, Kaxwaan, and Cocopa data

Comparison of Crawford (1963)

- Crawford (1966:4) wrote that “[n]o significant difference is apparent between Cocopa and [Kaxwaan] in either my list or Kroeber’s”.
 - This would be an easy claim to refute: Piipaash and Cocopa/Kaxwaan are very different.....
- I compare the data that Crawford (1963) collected with independent **Piipaash** (Langdon et al. 1991), **Kaxwaan** (Davis 1921, Kroeber 1930), and **Cocopa** data (Crawford 1989) in order to evaluate this claim.
- Indeed, JY’s speech exhibits linguistic features (phonological, lexical, and morpho-syntactic) **that identify it as Piipaash and not Kaxwaan/Cocopa**, consistent with Crawford’s original identification of the source language (1963) but inconsistent with subsequent claims (1966, 1983).....

Phonological features consistent with Piipaash

- A major phonological correspondence distinguishing the River languages (Piipaash, Mojave, and Quechan) from other Yuman languages stems from the strengthening of **Proto-Yuman *w, *y > River v, ḏ** (Miller 2018, Wares 1968).
- **JY uses v** where one would expect of a River language/Piipaash:
 - ‘two’ JY xavík Piipaash xvík Kaxwaan xowák, Cocopa xwák
 - ‘mouse’ JY ʔavÉ˘ Piipaash ʔavé: Kaxwaan awā-, Cocopa ʔawá:
 - ‘rock’ JY (?)əví: Piipaash (?)ví: Kaxwaan ^uwî-, Cocopa wí:
- **JY uses ḏ** where one would expect of a River language/Piipaash:
 - ‘eye’ JY ʔIḏó Piipaash i:ḏó Kaxwaan īyú-, Cocopa ʔiyú
 - ‘doctor’ JY k^wISI:ḏé⁽ⁱ⁾ Piipaash k^wsiḏé Kaxwaan kwuciyā-, Cocopa ʂk^wi:yá:

Phonological features consistent with Piipaash

- Other, minor phonological correspondences further identify JY's speech as Piipaash and as being distinct from Kaxwaan or Cocopa (cf. Wares 1968).

- **JY uses č** where Piipaash č corresponds to Kaxwaan/Cocopa s:

- 'fish' JY ʔIčí: Piipaash čí: Kaxwaan siʔíL, Cocopa siʔíʔ
- 'four' JY čʊmpép- Piipaash čmpáp- Kaxwaan sabáp', Cocopa spáp
- 'be cold' JY xačó:r Piipaash xčúr- Kaxwaan -----, Cocopa xsú:r

- **JY uses kʲ** where Piipaash kʲ corresponds to Kaxwaan/Cocopa k:

- 'seven' JY paxkʲé:- Piipaash pxkʲé:- Kaxwaan peXkát, Cocopa pxká:
- 'stepson' JY ʔIkʲIʂ- Piipaash kʲés- Kaxwaan -----, Cocopa kás/ká:s
- 'pestle' JY xmʊkʲéh Piipaash ----- Kaxwaan -----, Cocopa xmu:ká:

Lexical features consistent with Piipaash

- **JY uses a range of non-Kaxwaan lexical items that occur in Piipaash:**

• ‘coyote’	JY xatəlwí	Piipaash xatlʷwé	Kaxwaan xatpá-, Cocopa xɬpá
• ‘m. dove’	JY xoʂkʷevʰk	Piipaash xoʂkʷévk	Kaxwaan yelekū-, Cocopa lkú:/li:kú:
• ‘(g.h.) owl’	JY mamǎí:	Piipaash mmǎí:	Kaxwaan -----, Cocopa cu:pí:c
• ‘hair’	JY hiʔé	Piipaash iʔé/eʔé	Kaxwaan emaxwáL, Cocopa mxʷáɬ
• ‘hip’	JY čəqáʂ	Piipaash čqáʂ	Kaxwaan eʔpaʔúL, Cocopa (m)pʔú:t
• ‘shoulder’	JY məʂkʷíɫ	Piipaash mʂkí:	Kaxwaan -----, Cocopa ʂpí:r
• ‘be blue’	JY xavʰʂú:	Piipaash xvʂú:-	Kaxwaan xapicíw-, Cocopa xpsíw
• ‘be yellow’	JY kʷés-	Piipaash kʷés-	Kaxwaan aqwáce, Cocopa qʷás
• ‘be little’	JY nóq-	Piipaash nnóq-	Kaxwaan lyutcác, Cocopa lʷcáʂ
• ‘bow’	JY ʔu:tí:ʂ	Piipaash ʔu:tí:ʂ	Kaxwaan itcím’-, Cocopa ʔi:cím

Morpho-syntactic features consistent with Piipaash

- JY uses **-k/-m realis suffixes** on individually elicited verbs as well as in sentences (1), which are a feature of Piipaash (2) and not Cocopa (3):

1) ʔipá:-ʂ ma-yú:-**k**
man-SJ 3/2-see-**REAL**
'The man sees you.'
(JY; Crawford 1963)

2) ʔi:pá:-n^y-š m-yú:-**k**
man-DEM-SJ 3/2-see-**REAL**
'The man saw you.'
(Piipaash; Gordon 1986:37)

3) p-a:-wí:-c
3OBJ-1SJ-see-PERF
'I saw him.'
(Cocopa; Crawford 1966:194, 1989)

Morpho-syntactic features consistent with Piipaash

- JY uses **-k/-m realis suffixes** on individually elicited verbs as well as in sentences (4), which are a feature of Piipaash (5) and not Cocopa (6):

4) nʷá: marí:k ʔ-má:-**m**
I bean 1-eat-**REAL**
'I eat beans.'
(JY; Crawford 1963)

5) ʔayu:-ʔ-má:-**m**
something-1-eat-**REAL**
'I am eating/ate something.'
(Piipaash; Gordon 1986:154)

6) mcpák má-c
without eat-PERF
'I eat with nothing (i.e. no fork/spoon).'
(Cocopa; Crawford 1989:133)

Morpho-syntactic features consistent with Piipaash

- JY uses a **subject suffix -ʂ (7) that is consistent with Piipaash -š (8; Gordon 1986:37–40)** rather than Cocopa -c (9; Crawford 1966:104):

7) ʔipá:-ʂ xát yú:-k
man-**SJ** dog see-REAL
‘The man sees the dog.’
(JY; Crawford 1963)

8) Bonnie-š ʔi:pá:-ny-a mxán-k
Bonnie-**SJ** man-DEM-AUG like-REAL
‘Bonnie likes that man.’
(Piipaash; Gordon 1986:41)

9) q^wáqš-c xasán^y p-a:-šá:-c
horse-**SJ** little.girl 3OBJ-3SJ-bite-PERF
‘The horse bit the little girl.’
(Cocopa; Crawford 1966:186, 1989)

Linguistic features consistent with Kaxwaan

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Interim summary

- **JY's speech exhibits marked linguistic features identifying it as Piipaash** (i.e. as Crawford had originally identified it) **rather than Kaxwaan/Cocopa**.
 - **Phonological features** include River Yuman v , δ , as well as \check{c} , k^y (cf. Cocopa s , k).
 - **Lexical features** include River/Piipaash animal, body part, color terms, etc.
 - **Morpho-syntactic features** include River/Piipaash realis $-k/-m$, subject $-s/-š$.
- Crawford's (1966:3–4, 1983:567) subsequent claims (1) that JY spoke Kaxwaan and (2) that the contents of this wordlist exhibit “[n]o significant differences” compared to Cocopa are **demonstrably false**.
 - JY may have been “the last [Kaxwaan]” in terms of socio-cultural affiliation, but there is no evidence to suggest that she spoke Kaxwaan (to Crawford).....

What can we make of Crawford (1963)?

The state of Kaxwaan linguistics

- Crawford (1963) collected a list of **540 Piipaash words and sentences**.
 - This is not a bad thing: Piipaash is also relatively under-documented.
 - Geary (2021b), for example, uses the Crawford (1963) data to study variation in the realization of lateral consonants (*l*, *lʷ*) in Piipaash.
- But it does mean that **the linguistic documentation of Kaxwaan is still restricted to the short Davis (1921) and Kroeber (1930) wordlists**.
 - We have virtually no documentation of Kaxwaan morpho-syntax.....
- **The timing of Kaxwaan's dormancy remains unclear**, in that we only know that it continued to be spoken at least until 1930 (Geary 2021a).

How did Crawford mistake this for Kaxwaan?

- **It is not clear how Crawford mistook JY's speech for that of a Kaxwaan speaker** (especially given that he had correctly identified it as Piipaash originally).
 - Crawford was an expert on Cocopa and should have been able to recognize the many differences between JY's speech and Kaxwaan/Cocopa.....
 -I *speculate* that Crawford may have mistook Kroeber's Kaxwaan data for his own.....
 - In contrast, neither Laylander (1997) nor Golla (2011) are Cocopa/Piipaash scholars and were simply repeating Crawford's (1966, 1983) claim.
- This highlights a need to continually scrutinize claims in the linguistic literature.
 - A parallel: Missionary Marcus Whitman asserted that Cayuse and Molala (both now dormant) were the same language in an 1844 letter to Horatio Hale, who would later assign Cayuse and Molala to a Waiilatpuan language family in his language classification (1846). Scholars repeated this claim for over a century, until Bruce Rigsby (1965) compared the Cayuse and Molala data and determined that there was insufficient evidence to support a genetic affiliation.

Summary

- Crawford (1963) collected a list of words and sentences that he identified then as Piipaash but subsequently identified as Kaxwaan (1966, 1983).
- **Crawford collected this data from a Piipaash speaker:** It exhibits phonological, lexical, and morpho-syntactic features typical of Piipaash and not Kaxwaan.
 - This contradicts his later claim that the language in this list exhibits “[n]o significant difference” from Cocopa (1966:4), a dialect of the same language as Kaxwaan.
 - There is no linguistic evidence to support that JY was a Kaxwaan speaker. The claim that she was “the last [Kaxwaan]” ethnically also originates from Crawford (1966:4).
- **Two short wordlists remain the only linguistic documentation of Kaxwaan.**
 - Kaxwaan may have continued to be spoken after Kroeber collected his wordlist in 1930, but we have no linguistic documentation of Kaxwaan from later periods.

Thanks!

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