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PHONETIC ELEMENTS OF THE  
DIEGUENO LANGUAGE

BY

A. L. KROEBER AND J. P. HARRINGTON

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An opportunity afforded A. L. Kroeber to hear Diegueño as spoken by Rosendo Curo of Mesa Grande, San Diego County, California, in June, 1912, revealed great resemblances and some striking differences between its sounds and those of its sister tongue Mohave, likewise of Yuman family, of which a laboratory analysis had previously been made.<sup>1</sup> On the whole, the experience gained with Mohave made the phonetic elements of Diegueño seem easily recognizable.<sup>2</sup> Independent observations on the phonetics of the language courteously furnished by Mr. J. P. Harrington, who has had a brief opportunity to hear Diegueño, have been added as notes initialled by him.

POSITION

The points of articulation for consonants in Diegueño are the same as in Mohave. The palatal and velar stops, k and q, kw and qw, are perhaps less clearly distinguished. The dental and palatal-alveolar stops, t and ʈ, are formed as in Mohave, and

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<sup>1</sup> Present series, x, 45-96, 1911.

<sup>2</sup> Some Diegueño words recorded a number of years previously from Salidon and Onorato of San Felipe, then at Pala, were also available. T. T. Waterman has a phonetic key in the introduction, and a number of words in the body, of his "Religious Practices of the Diegueño Indians" (Present series, viii, 271-358, 1910) and J. P. Harrington some notes in *Journ. Am. Folk-Lore*, xxi, 324, 1908. There are said to be two Diegueño dialects, the southern being spoken at Manzanita, Campo, and La Posta. The northern dialect is the only one referred to here.

occur in the same stems; only in the word for earth, number 49 in the appended list of words, was palatal  $\text{t}$  heard in Mohave and interdental  $\text{t}$  in Diegueño. No general transposition of any sound to a more forward or backward formation is noticeable, except the uniform change of Mohave  $\delta$  to Diegueño  $\text{y}$ .

#### STOPS

The Diegueño stops, which are  $\text{p}$ ,  $\text{t}$ ,  $\text{t}$ ,  $\text{k}$ ,  $\text{kw}$ ,  $\text{q}$ ,  $\text{qw}$ , with which can be reckoned the affricative  $\text{tc}$ , are subject to the same rule that applies in Mohave and in a number of other native American languages: when initial or medial, they are half voiced, the explosion but not the occlusion being sonant; when final or followed by another consonant, they are entirely unvoiced and more strongly aspirated.

The stops on the whole show little change between the two languages. There are a few instances of stop and nasal interchanging; but they are uncommon. Such are: Mohave  $\text{t}$  becomes Diegueño  $\text{n}$  (nos. 1, 2 of the list)<sup>3</sup>; and Mohave  $\text{m}$  becomes Diegueño  $\text{p}$  (3, 4, 15, 30).<sup>4</sup>

#### NASALS

$\text{M}$ ,  $\text{n}$ , and  $\text{ny}$  also usually coincide in Mohave and Diegueño. Compare numbers 5, 10, 13, 18, 21, 22, 27, 29, 36, 37, and others in the list.

#### FRICATIVES

In this class of sounds the two dialects show more difference, Mohave  $\theta$ ,  $\delta$ , and  $\text{v}$  being lacking in Diegueño.

<sup>3</sup> Or may it be that Diegueño  $\text{Ex-inn}$ , recorded by me in its predicative form as  $\text{Ex-innk}$  or  $\text{Ex-inn}^{\circ}\text{k}$ , contains an  $\text{n}$ -sound cognate with that of Mohave  $\text{asentik}$ , it is one? Mohave  $\text{sito}$ , Cocopa  $\text{eit}$ , would then be regarded as a separate word, although perhaps of the same origin. Or perhaps the Diegueño  $\text{nn}$  stands for the Mohave  $\text{nt}$ ; this would be the reverse of what happens in no. 30 of the list, where a long nasal in Mohave is represented in Diegueño by nasal plus stop. As regards Diegueño  $\text{Exann}$ , it is probably the representative of Mohave  $\text{ahot}$ , Yuma  $\text{axot}$ , but one might also think of connection with Mohave  $\text{ta-ahana}$ , real, good.—J. P. H.

<sup>4</sup> Perhaps this change occurs most frequently at the beginning or end of a word. Cf. the change of  $\text{v}$  to  $\text{p}$  mentioned under Fricatives below. The change also occurs within Mohave (cf.  $\text{-mo\text{t}am}$  and  $\text{-potc}$ , negative suffixes) and probably also within Diegueño.—J. P. H.

Mohave surd interdental  $\theta$  is always *s* in Diegueño (4-10, 51).<sup>5</sup> Diegueño *s*, however, corresponds also to Mohave *s* (11-16). But in a few words (1, 17, 18) Mohave *s* becomes *x* in Diegueño.<sup>6</sup> This *x* seems to be formed more anteriorly than the ordinary *x* of Diegueño, which has a *k* or *h* articulation. It might therefore be distinguished as *x*.

It should be stated that the word for eagle was heard as *espa* as well as *ex-pa* from two of the Diegueño informants. Mr. Waterman writes *expa*.<sup>7</sup>

Diegueño *s* seems "sharper" than Mohave, that is, less like *sh*.

The Mohave sonant interdental fricative  $\delta$  is *y* in all corresponding Diegueño stems determined (19-21, 51, 73).

Another voiced fricative of Mohave, bilabial *v*, was normally heard as *w* in Diegueño (23-27, 58). Dr. Waterman also writes it *w*. When the ending *auva* becomes *au* in Diegueño (33, 64), it probably stands for *auw*, which would be regular, final vowels being frequently slurred or lost in Diegueño. In some instances (67, 73) Diegueño *p* seems to stand for *v*.<sup>8</sup> The word for no (72), *umau*, Mohave *vara*, appears to show the equivalence *v* > *m*; but this is probably fallacious, as the correspondence *o* > *au* is well established, which would give as the Mohave equal *umo* or *mo*, and this is apparently represented in that dialect by the negative suffix *-moṭe*.

It should be added that the single word "where" (22), Mohave *maki*, was heard in Diegueño as *maive*, with distinct bilabial *v*.<sup>9</sup>

The surd palatal or velar fricative *x* must also be mentioned here. In Mohave a corresponding sound was written both *h* and *x*, but was finally regarded as a breath accompanied by some pos-

<sup>5</sup> Mohave is the only Yuman language of the Central group which has  $\theta$  instead of *s*.—J. P. H.

<sup>6</sup> Cocopa has *c* or palatalized *s*, showing an intermediate stage between *s* and *x*.—J. P. H.

<sup>7</sup> Present series, VIII, 314, 1910.

<sup>8</sup> This change appears to occur frequently at the beginning or end of a word. Cf. the change of *m* to *p* (under Stops above).—J. P. H.

<sup>9</sup> Mr. Isidro Nejo of Mesa Grande pronounced the word *maipe*<sup>o</sup>, with *p*, when articulating slowly. Perhaps we have here to deal with some change such as in Shoshonean, where an informant will insist that such a word as *pa*, water, never can become *va*, and yet in talk will be heard to say *va* when the conditions require it.—J. P. H.

terior narrowing rather than a true fricative, as appears to be likewise the case in a number of other Californian languages. Hence the orthography *h* was adopted. In Diegueño the corresponding sound (2, 4, 9, 36, 38, 44, 47, 55, 56, 58, 75) is much more clearly of fricative character, and was therefore written, as also by Dr. Waterman, *x*.<sup>10</sup>

The labialized fricative *xw* corresponds to *x* as *kw* does to *k*. Perhaps *X* and *Xw*, paralleling velar *q* and *qw*, should also be distinguished. A sound similar to *xw* was found in Mohave, but seemed to be only *h* followed by a short *o* or *u* (32, 56, 62, 69). Possibly the orthography *hw* or *xw*, as in Diegueño, would be more accurate.

#### LATERALS

Mohave has two *l* sounds: *l* and *ly*. Diegueño has at least three: *l*, *ly* and *L*. Possibly *Ly* should be added.<sup>11</sup>

Mohave sonant palatalized *ly* corresponds, wherever the same stems could be compared, to Diegueño surd *L*, either unpalatalized (9, 11, 28-31, 34-37) or possibly palatalized (32, 33, 38). The only exceptions found, numbers 21 and 56, were recorded as sonant in Diegueño. These may be errors. The *L*, it should be added, is a spirant, not an affricative.

No regular Mohave equivalents have been determined for Diegueño voiced *l* and *ly*, which occur both medially and finally (4, 7, 13, 14, 39, 40, 41, 52, 63).<sup>12</sup> That they have not been found

<sup>10</sup> The Diegueño *x*, like that of the neighboring members of the Central group (Yuma, Maricopa and Cocopa) is much more fricative than its Mohave counterpart. A Yuma Indian living among the Mohave once very naively volunteered the information that the Yumas say *axa*, water, while the Mohaves say *aha*. These Yuman developments are almost exactly paralleled by the sound of Spanish *j* in various dialects of Spanish. In Californian and New Mexican Spanish the *j* is very *h*-like, and a Mohave renders this sound perfectly when he uses his Mohave *h* in talking Spanish. In certain dialects of old Spain, however, the *j* is very fricative, and I have felt when hearing it, as also in the case of the Yuma and Cocopa *x*, that it is articulated farther back in the mouth than is the *x* of German "ach."—J. P. H.

<sup>11</sup> Yuma and Cocopa have both voiced *l* and *ly* and voiceless *L* and *Ly*.—J. P. H.

<sup>12</sup> In 4, 7, 52 Diegueño has *-ly*, and Mohave has nothing. The fact that both *ewi* and *ewily* were given as meaning stone led to the supposition that *-ly* is merely a separable suffix, but the informant insisted that *esily*(7) is the only word meaning salt, and that *esi*(8) can mean salt under no circumstances but means to drink. The word meaning *fly* is

initially is not surprising, since very few Mohave words begin with either *l* or *ly*.

#### TRILLS

Diegueño and Mohave *r* occur in the same stems, as in numbers 3, 6, 61 of the list, but are differently formed. Diegueño *r* lacks the characteristic trill of the Mohave sound; it is soft, untrilled, and resembles English *r*. Dr. Waterman, who writes it *r*, calls it *surd*.<sup>13</sup> It occurs also in the following words: *kwe-rau*, hot; *pitckara*, two stand; *meri*, penis; *menura*, hear; *kosmirai*, crazy; *ekurr*, far. In the last word it is lengthened, that is, prolonged, like Mohave *rr*.

Another *r*, which is distinctly trilled and very much like Mohave *r*, though the precise point of articulation was not determined, was found only in the words *karap*, hit him (imperative), and *expa uru*, bald eagle. Dr. Waterman describes this sound as trilled and made with the tip of the tongue close to the front of the palate.<sup>14</sup> He writes it *r*, but gives it in only a few words. Of these, *kwinyor*, red, was not found by the author, and *sa'ir*, buzzard, was heard as *sa'i*.<sup>15</sup>

#### SEMI-VOWELS

Diegueño *y* sometimes represents Mohave  $\delta$ . In other stems it apparently is not the equivalent of this sound but of some other, probably *y*. No common stems in which *y* corresponds in the two languages have, however, been found.<sup>16</sup> Disregarding words in which *y* is not certain on account of neighboring *i*, it occurs in Diegueño in *yaip*, wind, *yuwil*, thigh, *oyuk*, outdoors, *kwayuk*, a lizard, 'uyel, flea, and perhaps also in *yimi*, wild cat, very irregular, appearing as *xalesmo* in Yuma. In 39 Diegueño has *-l*, Mohave nothing. In 13 Diegueño appears to have either *l* or *n*; Isidro Nejo gave the pronunciation *kwan'mesap*. Nos. 40, 41, 63 appear to be very irregular.—J. P. H.

<sup>13</sup> Present series, VIII, 272, 1910.

<sup>14</sup> *Op. cit.*, 272.

<sup>15</sup> Recorded as *sa'i*, with no *-r*.—J. P. H.

<sup>16</sup> May it be that Mohave *Kwayu* and Diegueño *Kuyahomar*, name of a mythic being, share *y* in common?—J. P. H.

and yamatai, panther, though the latter has also been recorded as nyimatai, which may be more correct in view of a probable relationship to the Mohave stem name.<sup>17</sup>

W occurs in Diegueño as the equivalent of Mohave bilabial v, probably also otherwise. While found in Mohave, it is rare in that language, and no certain correspondence of stems containing w have been determined between the two idioms. Thus Diegueño 'iteix, heart, seems to have no connection with Mohave 'iwa.

It need hardly be pointed out that kw and xw, like ly and ny, are only orthographies, and not combinations containing a simple w or y.

#### BREATHS AND GLOTTAL STOPS

The soft, faint h sound of Mohave, written ' , and frequent as the sign of the third person, recurs in Diegueño. The body-part terms written with it all contain the possessive element indicative of the third person.

Mohave h is represented by Diegueño x, already discussed. The difference between the sounds is not as great as the orthography might imply.

Glottal stops occur in Diegueño (16, 73), but were not noted as very vigorously formed.<sup>18</sup>

#### LENGTHENED CONSONANTS

Prolongation of consonants is a feature shared by Mohave and Diegueño. In addition to numbers 1, 2, 39, 46, 50, 60, 66, prolongation was observed in *esann*, younger sister, *ekurr*, far, *expannk*, whale, *amokwinn*, pipe, *axoll*, string. It will be observed that *nn* of *ex-inn* and *exann* (1, 2) corresponds to Mohave *t*, while on the other hand Mohave *hammulye* is represented by Diegueño *empil*.

<sup>17</sup> With the change in the last syllable of Mohave *numeta*, Diegueño *nyimatai*, cf. that in Mohave *kwaθidè*, medicineman (51), Diegueño *kwisiyai*.—J. P. H.

<sup>18</sup> A glottal stop after a final vowel and followed by a very short but fully voiced vowel of the same quality was heard in *kima'a*, sleep thou!, *maipe'e*, where?, and probably also in *piya'a*, this.—J. P. H.



## TABLE OF CONSONANTS

The articulation is not always identical for all the sounds represented by letters on one line.

	Stops, half sonant or aspirated surd	Affricative, half sonant or aspirated surd	Fricatives, surd	Nasal continuants, sonant	Lateral continuants, sonant	Lateral continuants, surd	Trilled continuant, sonant	Half-trilled continuant	Semi-vowels	Breath
Labial	p			m					w	
Dental	t									
Alveolar		t	s	n	l	L				
Prepalatal	tʃ	x		ny	ly	(Ly)	r	r	y	
Postalatal	k	x								
Postpalatal, labialized	kw	xw								
Velar	q	(Xʃ)								
Velar, labialized	qw	(Xwʃ)								
Glottal	ʔ									

## VOWELS

A characteristic trait of Mohave is the slurring of unaccented vowels, especially initially and finally. The same tendency seems even stronger in Diegueño, as numbers 9, 28, 29, 30, 31, 34, 36, 37, 47, 49, 61, 62, 68, 71 show. It is true that many of these words were at first heard without the final vowel in Mohave also; but, on the other hand, the slighted vowels were expected and listened for in Diegueño, so that their absence can hardly be explained by unfamiliarity alone.<sup>19</sup> It is quite likely that these and other similar stems really begin or end in consonants, and that the additional neutral a which Mohave shows is merely a euphonic increment.

This colorless and unaccented a was at first frequently heard as e in Mohave. The same was true of Diegueño. In fact, the sound generally continued to be so heard, and if recent impression were the only available guide, the author would have little hesitation in saying that Diegueño e (written *ɛ*) corresponded to Mohave a as the neutral vowel, as in 2, 5, 7, 10, 11, 15, 17, 23, 26, 28, 29, 33, 34, 35, 38, 42, 44, 45, 46, of the list. But in the

<sup>19</sup> I did not note any final vowel corresponding to the Mohave -a.— J. P. H.

records from the former informants a was often written instead of *ɛ* in these same words. Dr. Waterman also writes *xatca* for *xɛtca*, *awī* for *ɛwī* (though he agrees in *expa*, Mohave *aspā*). It must therefore be left open whether *ʌ*, as this colorless sound might be written, or *ɛ*, is the more proper designation for the unaccented neutral vowel of Diegueño; but the writer inclines to the belief that there is the suggested difference between Mohave and Diegueño on this point.<sup>20</sup>

The Diegueño vowel system seems also to differ from the Mohave in the occurrence of sounds of close quality, at any rate *i* and *u*,<sup>21</sup> in addition to the open values; and perhaps of a third, still different *i*. This may be the sound that Dr. Waterman has indicated by *ü*.

More certain are several definite correspondences with Mohave. Accented *a* generally recurs with distinct quality in both languages (3, 6, 9, 14, 15, 17, 18, 24, 25, etc.).<sup>22</sup>

Unaccented Mohave *a* is sometimes *i* in Diegueño: numbers 12, 14, 15, 21, 43, 51. On the other hand *i* becomes *a* in 28, 39.

<sup>20</sup> The determination of the quality of the vowel in these unaccented syllables proved so baffling that I determined to operate with a large number of characters. I soon found myself using nearly all the symbols for mixed vowels provided for by the alphabet of the International Phonetic Association. Before non-palatal sounds I heard the sound of *ʌ* or *ɛ*, usually as the former when I listened carefully, but I was impressed, as was Dr. Kroeber, that the sound is often more *ɛ*-like than in Mohave. Before palatal sounds I heard the sound even as *i*. Thus *inya*, sun, *xitca*, Pleiades, *miyulyk*, sweet. But I heard the word for eagle only as *expa* or *ʌxpa*, and find that I did not mark or note the *x* of the word as being different from the ordinary *x*. The *p* cuts off the offglide of the *x* and thus partly obscures the *x*. On the other hand, the Mohave *i* is certainly represented by a more open vowel than *i* in many Diegueño words. Thus Diegueño *ekwi*, cloud(53), 'etu, belly(54), 'exu, nose(55). Cf. Yuma and Cocopa *akwi*. But in Mohave the first vowel of these words is *i*. *Tinyam*, night(48), retains, however, its *i* as in Mohave, perhaps due to the following palatalized nasal. Can it be that *r* also exercises this palatalizing influence in such a word as *kwirak*, old man(61), Yuma *kwera'akʔ*. In Walapai *r* sometimes takes the place of Mohave *ly* and Mohave *ly* is a palatalized sound. The first vowel of this word in Mohave is sometimes *ʌ*, sometimes *o* (due to preceding *kwʔ*). Also Diegueño *atimm*, bow(66) has its first vowel rounded in Mohave. In Diegueño *au*, fire(64) (Mohave *a'auva*) the first vowel of the Mohave word seemed to be entirely lacking in the Diegueño word. Certainly the number of more or less distinct vowel qualities is very large and it remains to be determined how the variations should be grouped and to what extent they are the result of contiguous sounds.—J. P. H.

<sup>21</sup> Close *i* was heard in *tinyam*, night(48), *piya'a*, this(73) and *emily*, leg(52), perhaps due to the following *ny*, *y* or *ly*. In several words a moderately close *u* was heard.—J. P. H.

<sup>22</sup> This *a*, as in Mohave, often has considerable *ʌ*-quality.—J. P. H.

Mohave e and i become respectively i and e in Diegueño about as often as they retain their quality. Thus, e equals i in numbers 5, 26, 32, 40, 45, 52, 53, 56; i becomes e or  $\epsilon$  in 8, 11, 18, 19, 42, 52, 53, 54, 55; while i recurs as i, or e as e, in 1, 7, 8, 9, 16, 20, 23, 31, 48, 51, 65, 66, and 73.

Of the back vowels, o is uncommon in Diegueño. Mohave o is represented most frequently by u in Diegueño (4, 20, 34, 35, 41, 46, 54, 57), or sometimes, at least when final, by au (3, 19, 56).<sup>23</sup>

Mohave u is less often altered in Diegueño. It is preserved in numbers 21, 42, 55 of the list. When Diegueño alters Mohave u, it is usually to a front vowel (13, 30).

## ACCENT

So far as aural impression may be relied upon, the stress and pitch accents of Diegueño seem to be identical with those of Mohave.

## COMPARATIVE LIST

	<i>English</i>	<i>Mohave</i>	<i>Diegueño</i>
1	one	sito	Ex-inn <sup>24</sup>
2	good	ahòt	Exann
3	fox	marho	parxau
4	fly	θilyahmo	mesxapu-ly
5	woman	θenya'āka	sinyE
6	five	θarap-k	sarap <sup>25</sup>
7	salt	aθ'i	Esi-ly
8	drink	iθi	Esi
9	ocean	(a)ha-θo'ilya	xa-sil
10	raccoon	namaθa	nEmas
11	hand	isalya	ESEL
12	liver	'ipasa	tc-ipesi
13	star	ha-muse	kwily-mesap <sup>26</sup>
14	mockingbird	sakwa-θa'ālya	sakwi-lau
15	white	nyamasām	kwe-nimsap
16	buzzard	asei	sa'i
17	eagle	aspā	Ex-pa <sup>27</sup>

<sup>23</sup> With the equivalence Mohave -o = Diegueño -au, cf. Mohave -e = Diegueño -ai in no. 51.—J. P. H.

<sup>24</sup> Also given as Ex-innk, it is one.—J. P. H.

<sup>25</sup> It is stated that the proper Diegueño term for five is 'esalxakai.—J. P. H.

<sup>26</sup> The informant gave kwan<sup>c</sup>mesap, evidently a variant form.—J.P.H.

<sup>27</sup> Expa?—J. P. H.

	<i>English</i>	<i>Mohave</i>	<i>Diegueño</i>
18	sleep	i-smā	E-x-mā
19	tooth	'idò	Eyau
20	eye	'idò	iyū
21	sweet	maḍuly-k	miyul-k
22	where	maki	maive <sup>28</sup>
23	stone	avi	Ewi <sup>29</sup>
24	house	ava	awa
25	south	kaveik	kawak
26	rattlesnake	āve	Ewī
27	you (pl.)	māteva	minyawapte <sup>30</sup>
28	tongue	'ipalya	'anapEL
29	ear	'amalya	'emaL
30	ash	hammulye	empil
31	hot, day	'ipily-k	'upil
32	skunk	ilyhue	kwilyexwiru <sup>31</sup>
33	rabbit	halya'auva	xELiau
34	spider	halytota	xELtut
35	roadrunner	talypo	TELpu
36	gourd, turtle	ahnalya	axnaL
37	rat	amalyka	maLk
38	moon	haly'a	xELya
39	arrow	ipa	apall
40	beard	'iavume	'alemi
41	mortar	ah-mo	kaly-mu
42	see	iyu	Ewu
43	sun	anyā	inya
44	Pleiades	hateca	xETca
45	metate	ahpe	Epi
46	mountain-sheep	ammo	Emmu
47	dog	ahaṭa	axaṭ
48	night	tinyam	tinyam
49	earth	amaṭa	amat
50	sky	ammaya	ammai
51	mediciner	kwaiḥè	kwisiyai <sup>32</sup>
52	leg, foot	'ime	'emi-ly
53	cloud, rain	ikwe	ekwi
54	belly	'ito	'etu
55	nose	'ihù	'exu
56	nail	kelyuho <sup>33</sup>	silyexwau
57	white man	haiqo, hiiqo	xaiqu
58	two	havik	xawok <sup>34</sup>

<sup>28</sup> Given as maipe<sup>o</sup>.—J. P. H.

<sup>29</sup> Given also as Ewily.—J. P. H.

<sup>30</sup> Given as minyawap.—J. P. H.

<sup>31</sup> Given as kalyixwi'u.—J. P. H.

<sup>32</sup> Recorded as kwisiyai.—J. P. H.

<sup>33</sup> Mohave ho < hwoʔ.—J. P. H.

<sup>34</sup> The pronunciation is practically identical with the Cocopa.—J. P. H.

<i>English</i>	<i>Mohave</i>	<i>Diegueño</i>
59 mouth	'īya	'ā
60 knee	memepùka	mexetunn
61 old man	kwora'āka	kwirak
62 blood	ahoata	axwat
63 snow	'upaka	alāp
64 fire	a'auva	āu
65 dance	ima	ima
66 bow	otisa	atimm
67 tobacco	auva	up
68 deer	aqwāqa	aqwaq
69 badger	mahoa	maxwa
70 bird	tciyère	asa
71 raven	aqāqa	axāq
72 no	vāra	umau <sup>35</sup>
73 this	viða-nya	piya' <sup>36</sup>
74 bad	alai-k	wiLite
75 cane	ahtā	axtā

## CORRESPONDING SOUNDS

<i>Mohave</i>	<i>Diegueño</i>
p	p
t	t
ṭ	n (occasionally)
ṭ̣	ṭ
k	k
kw	kw
q	q
qw	qw
te	te
m	m
ṃ	p (sometimes)
n	n (usually)
ny	ny (usually)
∅	s
s	s (usually)
ṣ	x (occasionally)
ð	y
v	w (always when medial)
ṿ	p (sometimes)
h (x tinge)	x
ho (= xw)	xw
	X (ʔ)
	Xw (ʔ)
ly	L
(ʔ)	l

<sup>35</sup> Recorded as 'umau.—J. P. H.<sup>36</sup> Recorded as piya'ā.—J. P. H.

<i>Mohave</i>	<i>Diegueño</i>
(ʔ)	ly
l	(ʔ)
r (trilled)	r (untrilled)
(ʔ)	r (trilled)
rr	(ʔ)
y	y (ʔ)
w	(ʔ)
‘	‘
,	,
a	a (normally)
a	i (occasionally)
a (unaccented = A)	E
e	e (frequently)
e	i (frequently)
i	i (frequently)
i	e (frequently)
i	a (rarely)
o	u (usually)
o (final)	au (sometimes)
u	u
u	i, e (occasionally)
(ʔ)	o (rare)

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