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141.0 **A PHONEMIC ANALYSIS OF NEPHITE AND JAREDITE PROPER NAMES.** By John A. Tvedtnes, MA, graduate student in Semitic linguistics and archaeology, Hebrew University, Jerusalem. Presented at the Twenty-second Annual Symposium on the Archaeology of the Scriptures and Allied Fields, held at Brigham Young University on October 28, 1973.

Editorial Note. The author of this paper explores the fascinating subject of the names of persons and places found in the Book of Mormon. He accepts the many indications that the principal tongue of the Lehite-Mulekite peoples of the Book of Mormon was essentially Hebrew, and that the names of persons and places recorded therein are therefore mostly in that language. Tvedtnes also proposes that the proper names of the Jaredites as recorded in the Book of Mormon were drawn from the Akkadian and Sumerian languages, confirming the Mesopotamian origin of that earlier people. The reader will notice that Joseph Smith, the professed discoverer and translator of the Nephite record in the 1820s, could not possibly have had knowledge of those extinct Mesopotamian languages (they did not become known to scholars until after the decipherment of the ancient cuneiform writing of Mesopotamia in the mid-nineteenth century).

This is a rather technical paper in the field of Near Eastern linguistics and for this reason a glossary has been added. But it also has an important connection with the Americanist field of Book of Mormon studies, especially for Latter-day Saints who wish to pursue linguistic studies in preparation for the day of full understanding of the ancient hieroglyphic writings of the Book of Mormon area of Mesoamerica. RRC.

IN AN ARTICLE ENTITLED "Hebraisms in the Book of Mormon" (*Brigham Young University Studies*, Autumn, 1970), I presented evidence to support the view that a partly Hebraic structure characterizes the present English text of the Book of Mormon. In so doing, I also observed that the translation of the indicated original Hebrew text by the prophet Joseph Smith was quite literal, considering the syntactic differences between Hebrew and English.

It follows that, if the Prophet in his translation followed so closely the syntax of the indicated original Hebrew text, he would also have made an attempt to transliterate directly the proper names in Mormon's record. That this was the case is evidenced by the testimony of David Whitmer and Emma Smith to the effect that whenever Joseph came to proper names he spelled them out for his scribe (Hugh Nibley, *Lehi in the Desert*, 1952, p. 32). Note, however, that some names were actually translated into English. "Red Sea" and "Alpha and Omega"—the latter a Greek term—have taken on their biblical forms, while the place-names Bountiful and Desolation were apparently translated in order to better describe why the regions were so named.

For some time I have been interested in the possible meanings of the non-biblical proper names in the Book of Mormon. Dr. Hugh Nibley began an investigation of this subject in his *Lehi in the Desert* (see esp. pp. 27-30), wherein he listed some of these names and correlated them with proper names known from the Old World but not the Bible. A colleague of mine, Robert F. Smith, has expanded upon this work by beginning a detailed comparison of Book of Mormon proper names with Hebrew, Egyptian, Akkadian, Sumerian, etc., in order to determine their possible meanings. It was while reviewing some of his hand-written notes, left

for me in Jerusalem, that I discovered a notation regarding English letters that did not occur in the Jaredite proper names. A further note pointed out that the letter *v* occurred but once, in the name Levi, which is also a biblical name.

I then considered the possibility that a phonemic analysis would reveal a different phonological structure for Jaredite names than for Nephite names, at least in the lack of certain sounds in one and their existence in the other. Let me again note, from Robert Smith's lists, that Nephite-Lamanite names tend to be apparently of Hebrew and Egyptian origin, while the Jaredite names appear to be mostly Akkadian and Sumerian, betraying the Mesopotamian origin of the latter.

But when I had completed my analysis, I noted that the difference between the Jaredite and Nephite phonemic systems was even greater than I had supposed. How was this possible, since both were taken from the Nephite abridgement, which, being written in but one writing system, could not accurately have illustrated two separate sound systems? (Nor, of course, can the English transliteration; hence, I have really analyzed a faulty transliteration that may not show all phonemes in the two systems under consideration.)

One would expect that Moroni, when transliterating Jaredite proper names in his abridgement of the Book of Ether, would have approximated their sounds to sounds already found in his own language. Actually, the answer was obvious: it had to do with Joseph Smith's transliteration and not Moroni's. The Prophet, we must recall, used a divine instrument (the Urim and Thummim) to translate the Book of Mormon. Certainly this instrument would have been capable of transliterating the Jaredite names, for they were in their original form in Ether, rather than in their Nephite form as adapted by Moroni.

BIBLICAL NAMES

There were some important decisions to be made before beginning the analysis. These had to do with the biblical names occurring in the Book of Mormon. Should they be included in the analysis, or not? Obviously, if they were names used by the Book of Mormon peoples in reference to persons and places in their new-found homeland, it would be best to include them. Therefore, I decided to retain biblical names actually used as Nephite or Jaredite names, while eliminating from the list all names referring to characters or places named in the Bible (such as those occurring in the extensive quotes from Isaiah). I did this mainly because it became obvious, in my earliest analysis, that Joseph Smith had made a concerted attempt to retain the biblical (King James) spelling wherever the name was already known from the Bible, while he newly transliterated all other names.

The retention of some biblical names which had reference to Nephite or Jaredite characters or places would naturally cause some problems, since their transliteration would not be accurate in some instances. However, I felt that in instances where a given phoneme could be postulated *only* on the basis of these names, it would be a simple matter *not* to postulate it, and to give the reasons in a footnote. In most instances this presented no problem whatsoever, inasmuch as the transliteration system used by Joseph Smith was very similar to that used by the translators of the King James Bible, with a few noteworthy exceptions that will be apparent to anyone reading the lists of names.

Another question to be resolved was that of non-Nephite names in the Nephite period. What of the Lamanite, Lemuelite, Zoramite, Ishmaelite, and Mulekite names found in the text? Actually, these were so few in number that a separate analysis would have been futile. Moreover, after I included them in the list of Nephite names, I found that they did not change the results of my analysis. This, of course, was sufficient evidence of the relatedness of all these peoples in their languages—a fact to be expected, since all of them came from the Jerusalem region.

However, a few obvious Jaredite names occur among the Nephite-Mulekite peoples. Dr. Nibley has pointed out that in many instances the Mulekites (for such they seem to have been) bearing these Jaredite names were the rebel leaders in the Nephite land, and that they carried on the "secret combinations" which had been known to the Jaredites (ibid., pp. 238-248). It is obvious that Jaredites of whom we have no record must have intermarried with the Mulekites (probably before the latter merged with the Nephites), preserving both Jaredite names and Jaredite customs. In regard to the Jaredite names used in Nephite times, I decided to retain them and to take them into account only if they happened to be the sole evidence for specific phonemes otherwise unattested in the Nephite language. Moreover, deleting them would have involved a subjective judgment regarding which of these names were Jaredite, since some of them are not actually attested in the Jaredite record (see below).

WHAT DID THE STUDY PRODUCE?

With this background to the procedure used, let us now examine the results. In order to provide a base for further study by other scholars, I will include the name-lists I used in the analysis. (Note that not all these names appear in the index or pronouncing guide of the Book of Mormon, and some are misspelled in those lists.) In both the Nephite and Jaredite lists, I have deleted the generic names ending with *-ite*. (B) after a name means that this form occurs in the Bible.

JAREDITE NAMES

1.Aaron (B)	22. Ethem	43. Nehor
2. Ablom	23. Ether (B)	44. Nimrah (B)
3. Agosh	24. Gilead (B)	45. Nimrod (B)
4. Ahah	25. Gilgah	46. Noah (B)
5. Akish	26. Gilgal (B)	47. Ogath
6. Amgid	27. Hearthom	48. Omer (B)
7. Amnigaddah	28. Heshlon	49. Orihah
8. Cohor	29. Heth (B)	50. Pagag
9. Com	30. Jacom	51. Ramah (B)
10. Comnor	31. Jared (B)	52. Riplakish
11. Coriantor	32. Kib	53. Ripliancum
12. Coriantum	33. Kim	54. Seth (B)
13. Coriantumr	34. Kimnor	55. Shared
14. Corihor	35. Kish (B)	56. Shelem
15. Corom°	36. Levi (B)	57. Shez
16. cumon	37. Lib	58. Shiblon
17. curelom	38. Mahah	59. Shim
18. deseret	39. Mahonri Moriancumr°°	60. Shiz
19. Emer	40. Moriancumer	61. Shule
20. Ephraim (B)	41. Morianton	62. Shurr
21. Esrom (B)	42. Moron	63. Zerin

°Appears as Corum in one place in the RLDS version.
°°Called the "brother of Jared" in the Book of Mormon.

His name was given by revelation to Joseph Smith (see Alma P. Burton, *Discourses of Joseph Smith*, 1956, pp. 181, 206. See also G. Reynolds, "The Jaredites," *Juvenile Instructor* 27:282 and *Improvement Era* 8:705.)

There are but few problems with the Jaredite names. One, however, regards the place-names. We must recall that Moroni rewrote the Book of Ether in an abridged form. It is possible, therefore, that whenever he discussed names of places known to both his people and the Jaredites (this would exclude Jaredite place-names from the Old World), he used the *Nephite* name, rather than the Jaredite. In two instances only does he say a place was so "called by the Nephites" (Ether 7:6; 9:31) On two other occasions he refers to "a place which was called_____," without telling which people had so named it (Ether 9:3; 15:10).

In a few instances the Jaredite name is clearly being used; Akish, Corihor, Heth, Moriancumer, Moron, and Nimrod, applied both to places and to Jaredite men. In other instances Moroni gives the Jaredite name and then tells us what it means (see Ether 2:3; 3:1; 15:8), while on one occasion he cites what appear to be two Jaredite animal names, which he may have been unable to translate into his own language (Ether 9:19). While both the Jaredites and the Nephites used Shim for the name of a hill (see Ether 9:3; Mormon 1:3), the hill in which Mormon hid the records is called Ramah in Ether (15:11), while Mormon calls it Cumorah (Mormon 6:6). The Jaredite place-name Nehor (Ether 7:4) appears as the name of a Nephite man (Alma 1:15), as does the name Gilgal (see Ether 13:27; Mormon 6:14; 3 Nephi 9:6); and it is unclear whether the Nephites adopted the Jaredite name or whether Moroni is giving the Nephite place-name in these instances. In any case, Gilgal, being Hebrew, might be unexpected in the Jaredite record; the same is

true of the Jaredite hill Ephraim (Ether 7:9). This leaves us with the problem of two other biblical names given to Jaredite kings, Levi (Ether 1:20; see also 3 Nephi 24:3) and Noah (Ether 7:14; see also Mosiah 7:9).

Because I was unable to decide which of these names are truly Jaredite, I felt it best to include them in the analysis. Hence, by determining the environments of each of the consonants and vowels in the Jaredite proper names (including place-names, some of which may be Nephite), I inferred the following phonemic pattern:

JAREDITE PHONEMES

STOPS:	p	t	k	
	b	d	g	
FRICATIVES:		s	š	h
		z		
RESONANTS:	m	n	r	l
VOWELS:	i		u	
	e	o		
	a			

Allophones are as follows: /k/ has allophones [k], which occurs before /i/ (Nos. 32, 33, 34, 35, 5, 52), and [c], which occurs before /o/ and /u/ (Nos. 8 through 17, 30, 39, 40, 53); /i/ has allophones [j], which occurs initially (Nos. 30, 31), as in the transliteration of biblical names (i.e., [y]), and [i], which occurs elsewhere. It is noteworthy that /u/ occurs only before the resonants (Nos. 12, 13, 16, 17, 39, 40, 53, 61, 62). However, because the other vowels also occur before resonants, phonemic status must be accorded to /u/.

Note that the *ph* combination occurs only in No. 20, Ephraim, which here appears in its biblical form. Since this is the name of a hill, Moroni may be giving the Nephite name. On the other hand, the biblical name Levi also occurs as No. 36, the name of a Jaredite king. It is probable that Joseph Smith merely gave the King James form to these two names, and hence we may discount them in our analysis. However, it is possible that *ph* and *v* are, respectively, fricative allophones of the stops /p/ and /b/, occurring after /e/. It is also possible that /v/ is an allophone of /u/, occurring intervocalically. I have chosen to delete them, however.

The one problem with which I have not dealt above is the occurrence of *th* in the Jaredite names. It, too, occurs in Jaredite names that also happen to be found in the Bible (No. 54, Seth, and No. 29, Heth). It may be that, as in Hebrew, *th* is an allo-

phone of /t/, occurring after vowels (see Nos. 22, 23, 47). However, in No. 27, it occurs after a consonant /r/; hence it may be the phoneme /t/, followed by /h/, rather than a fricative. Or, since it occurs after the resonant /r/, it may be that the fricative allophone occurs both after resonants and after vowels, while the stop allophone occurs elsewhere. The problem is further complicated by the occurrence of a final /t/ after a vowel in No. 18, *deseret*. It is possible that this latter is a different kind of a /t/ (such as the *tav* vs. the *teth* in Hebrew), which cannot be transliterated accurately in English. There are, therefore, several possibilities, but the data are insufficient to justify a more precise judgment on the matter.

NEPHITE PROPER NAMES

We come now to an examination of the Nephite proper names. Some of these, being biblical, are marked (B). Others are clearly Jaredite, and some suspected Jaredite names. These are marked (J). As mentioned, we have assumed that the Nephite, Lamanite, Mulekite, etc., phonological systems were the same. They may have all spoken the same language, at least after the time of Mosiah I. We read that this Mosiah and his Nephite followers were unable to communicate with the Mulekites when they first met them, and that the Mulekites were taught the Nephite language (Omni 17-18). We likewise read of a later time when "the language of Nephi began to be taught among all the people of the Lamanites" (Mosiah 24:4). In the latter instance, it is not clear whether this involved only the Nephite writing system, the Nephite speech, or both. In any case, the results would not be changed were the Lamanite names deleted from our list.

NEPHITE NAMES

1. Aaron (B) (J)	16. Ammonihah
2. Abinadi	17. Ammoron (J)
3. Abinadom	18. Amnihu (J?)
4. Abish	19. Amnor (J?)
5. Aha	20. Amoron (J)
6. Alma	21. Amos (B)
7. Amalaki	22. Amulek
8. Amalickiah	23. Amulon
9. Amaron (J)	24. Angola
10. Aminadab (B)	25. Ani-Anti
11. Aminadi	26. Anti-Nephi-Lehi
12. Amlici	27. Antiomno
13. Ammah	28. Antion
14. Ammaron (J)	29. Antionah
15. Ammon (B)	30. Antionum

31. Antipara
32. Antipas (B)
33. Antipus
34. Antum (J?)
35. Archaeantus
36. Benjamin (B)
37. Boaz (B)
38. Camenihah (J)
    RLDS: Cumenihah
39. Cezoram
40. Chemish
41. Corianton (J)
42. Coriantumr (J)
43. Cumeni (J)
44. Cumorah (J?)
45. David (B)
46. Emron (J?)
47. Enos (B)
48. Ezias (cf. D&C 84:12-13)
49. Ezrom
50. Gad (B)
51. Gadiandi (J?)
52. Gadianton (J)
53. Gadiomnah (J?)
54. Gazelem (cf. D&C 78:9)
55. Gid
56. Giddianhi (J?)
57. Giddonah
58. Gideon (B)
59. Gidgiddonah
60. Gidgiddoni
61. Gilgal (B) (J?)
62. Gimgimno
63. Hagoth
64. Helam (B)
65. Helaman
66. Helem (B)
67. Helorum
68. Hem
69. Hermounts
70. Himni
71. Irreantum
72. Isabel
73. Isaiah (B)
74. Ishmael (B)
75. Jacob (B)
76. Jacobugath
77. Jarom
78. Jashon
79. Jeremiah (B)
80. Jershon
81. Jerusalem (B)
82. Jonas (B)
83. Joneam
    RLDS: Jeneum
84. Jordan (B)
85. Joseph (B)
86. Josh
87. Joshua (B)
88. Judea (B)
89. Kishkumen (J)
90. Korihor (J)
91. Kumen (J)
92. Kumenonhi (J)
93. Laban (B)
94. Lachoneus
95. Lamah
    RLDS: Lama
96. Laman
97. Lamoni
98. Leah (B)
99. Lehi (B)
100. Lehi-Nephi
101. Lehonti
102. Lemuel (B)
103. Liahona
104. Limhah
105. Limher
106. Limhi
107. Limnah
108. Luram
109. Manti
110. Mathoni
111. Mathonihah
112. Melek
113. Middoni
114. Midian (B)
115. Minon
116. Mocum (J?)
117. Morianton (J)
118. Moriantum (J)
119. Mormon (J?)
120. Moroni (J)
121. Moronihah
122. Mosiah
123. Mulek RLDS:
     sometimes, Mulok
124. Muloki
125. Nahom
126. Neas
127. Nehor (J?)
128. Nephi°
129. Nephihah
130. Neum
131. Noah (B)
132. Omner
133. Omni
134. Onidah
135. Onihah
136. Onti
137. Paanchi
138. Pachus
139. Pacumeni (J)
140. Pahoran
141. Rabbanah
142. Rameumptum
143. Riplah (J?)
144. Sam
145. Samuel (B)
146. Sariah
147. Seantum
148. Sebus
149. Seezoram
150. Senine
151. Senum
152. Seon
153. Shazar
154. Shem (B)
155. Shemlon (J?)
156. Shemnon (J?)
157. Sherem
158. Sherrizah
159. Sheum
160. Shiblom (J?)
161. Shiblon (J)
162. Shiblum (J?)
163. Shilom
164. Shim (J?)
165. Shimnilom (J?)
166. Shum
167. Sidom
168. Sidon (B)
169. Siron
170. Teancum (J?)
171. Teomner
172. Timothy (B)
173. Tubaloth
174. Zarahemla
175. Zedekiah (B)
176. Zeezrom
177. Zemnarihah
178. Zenephi
179. Zeniff
180. Zenock
181. Zenos
182. Zerahemnah
183. Zeram
184. ziff
185. Zion (B)
186. Zoram

°*Nephi* does not occur in the Bible, but it does occur in the Apocrypha (2 Maccabees 1:36).

NEPHITE PHONEMES

STOPS:	p	t	k	c(*q*)
	b	d	g	
FRICATIVES:	s	š	x(*ch*)	h
	z			
RESONANTS:	m	n	r	l
VOWELS:	i		u	
		e	o	
		a		

Allophones are as follows: /p/ has allophones [φ] (*ph*), which occurs after vowels (Nos. 26, 85, 100, 128, 129, 178), and [p], which occurs elsewhere; /t/ has allophones [θ] (*th*), which occurs after vowels (Nos. 63, 76, 110, 111, 172, 173), and [t], which occurs elsewhere; /u/ has allophones [v], which occurs intervocalically (No. 45), and [u], which occurs elsewhere; /i/ has allophones [j], which occurs initially (Nos. 75 through 88), and [i], which occurs elsewhere.

The latter description is not really accurate, for initial /i/ occurs in Nos. 71 to 74. Nevertheless, assuming a Hebrew base to the Nephite language, all names transliterated with an initial vowel must, in reality, begin with the glottal stop (in Hebrew writing the letter *aleph*). Likewise, since clusters of vowels do not occur in Hebrew (except for the *furtive patah*, which will not be explained here), it seems obvious to me that those instances of vowel clusters in the Nephite names were actually cases of two vowels separated by either the glottal stop (Hebrew *aleph*) or by the voiced pharyngeal fricative (Hebrew *ʿayin*), neither one of which can be transliterated in English.

An examination of some of the biblical names in the list adds to the evidence that this may be the case (see Nos. 37, 58, 74, 98, 102, 145; the *furtive patah* occurs in Nos. 87 and 131). The transliteration of semivocalic /i/ (that is, the allophone occurring before vowels) as [i] medially (Nos. 27 to 30, 41, 42, 48, 51 to 53, 56, 73, 79, 103, 114, 117, 118, 122, 146, 175, 185) and as [j] initially (Nos. 75 through 88) follows King James, and the medial [j] of Benjamin (No. 36), is also King James. The letter *y* occurs only in the biblical name Timothy (No. 172).

With a basic knowledge of Hebrew, one can readily see that the Nephite phonemic system is the same as the Hebrew. Some of the Hebrew phonemes are missing, but this may be accounted for by the fact that we have a selected list of names; in addition, some Hebrew phonemes (as explained above) cannot be transliterated into English.

I was tempted to list the *ff* in ziff (No. 184) and Zeniff (No. 179) as an allophone of /p/, because it occurs only in final position (the final *ph* in Joseph, No. 85, may be attributed to an attempt to follow the King James rendering), but in a private communication to Robert F. Smith dated February 14, 1972, Dr. John Sorenson indicated that this would be final /w/, since ziff is a Hebrew word.

Even the fricative allophones of the Hebrew stops are reflected in the transliterations of Nephite names. It is interesting to note, however, that fricative allophones do not occur for all the stops. For example /b/, /d/, and /g/, the voiced stops, all occur both after vowels and elsewhere, and hence do not have the fricative allophone. The same seems to be true of /k/. The tendency of these stops to lose their fricative allophones, a phenomenon of Israeli Hebrew (where only /b/, /p/, and /k/ have retained them), should not surprise us in the development of the Nephite language. In only one instance, Riplah (No. 143), does /p/ occur after a vowel. This, however, appears to be a Jaredite borrowing, for which see the Jaredite names Riplakish (No. 52) and Ripliancum (No. 53).

The question of the velar and uvular stops is intriguing. Here we have three symbols in the Nephite names—*k*, *ch*, and *c*. (It would appear that *ch* is the Hebrew *heth*.) I have assumed that *k* represents Hebrew *kaph* (/k/), and that *c* represents the uvular *qoph* (/q/). The *ck*, on the other hand, is a bit problematic. It occurs in but two names, Zenock (No. 180) and Amalickiah (No. 8). I was tempted to treat it as a fricative allophone of /k/, since the other two voiceless stops have such allophones. But this seems impossible, since /k/ occurs after vowels as well (Nos. 7, 22, 112, 123, 124). With the exception of Muloki (No. 124), however, all of these examples show /k/ after /e/, unless we adopt the frequent RLDS reading of Mulok instead of Mulek. I hesitate to accord phonemic status to *ck* on the basis of only two examples, especially since otherwise there is good evidence of a Hebraic sound system in the Nephite names.

In my investigation of the consonants /k/ and /c/, another provocative phenomenon came to my attention. With the exception of but a few names (Amlici, Jacob, and Jacobugath, where the occurrence is medial, and Cezoram—cf. Seezoram—where the occurrence is initial), the names containing /c/ seem to be Jaredite in origin (note the *cum* element in MoCUM, TeanCUM, CUMorah, and CUMeni). The same was true for all names with initial /k/. My analysis of Jaredite names showed that [k] and [c] were allophones of a single phoneme, since they

were mutually exclusive. This is not true, however, of their occurrence in the Nephite list. The following comparative listing will illustrate:

Nephite Names	*Jaredite Names*
90. Korihor	14. Corihor
42. Coriantumr	13. Coriantumr
41. Corianton	11. Coriantor (cf. 41. Morianton)
	12. Coriantum

As can be seen, the Jaredite [c] sometimes is transliterated as /c/ in the Nephite names, while at other times, it is /k/. Evidently, while the Jaredites did not distinguish between the two voiceless velar (?) allophones in their language ([k] and [c]), the Nephites did make a distinction in their own language, an indication of the phonemic status of the /k/ and /c/ in the Nephite names. But due to the absence of such a distinction in Jaredite, when the Nephites (probably through the Mulekites) adopted Jaredite names, they sometimes took the Jaredite [c] as /k/, sometimes as /c/. This may also be illustrated by a list of the Nephite names containing the element *kumen*, which appears to come from the Jaredite language (cf. the elements *com* and *cum* in Jaredite), though it is unattested there:

91. Kumen	92. Kumenihah
43. Cumeni	38. Camenihah (RLDS: Cumenihah)
89. Kishkumen (cf. Jaredite No. 35, Kish)	

No mention has been made of consonant clusters thus far, and hence I will briefly point out a few significant facts. In Jaredite, there seem to be no instances of clusters of more than two consonants (typical of Semitic languages, though also of many other languages), unless the *th* in No. 27 represents two phonemes (see above). A peculiarity of Jaredite, however, is the occurrence of final consonant clusters, of which there are three (Nos. 13, 39, and 62). Since the phoneme /r/ is involved in each case, one might suspect it to be a syllabic resonant (as in English *butter, ladder,* etc.); this is hardly likely in No. 62, however, where we have a geminated /r/.

Most Nephite consonant clusters are likewise limited to two consonants, as we might anticipate (assuming the language to be Hebrew). Of import is the finding that the only such cluster in final position is in a Jaredite name (No. 42). The *nts* in No. 69 may represent only two consonants, /n/ and /¢/ of Hebrew *sadeh* (which is often transliterated *ts* in English). But No. 142, with its cluster of *mpt*, is more problematic. It may be that the *p* is not a separate phoneme, but rather shows the changeover from the voiced bilabial /m/ (by intermediary of

voiceless bilabial /p/) to voiceless dental /t/. Hence, oftentimes speakers of English write *Sampson* instead of *Samson*, because they feel the *p* effectively represents the devoicing after /m/, in preparation for the following /s/.

CONCLUSIONS

In summation it may be stated that, despite a few minor problems (which would probably not have existed had there been additional names in the lists), the phonemic systems of both Jaredite and Nephite are rather clear, at least so far as we have them represented in the transliteration of Book of Mormon proper names. Some refinement of the analysis presented here may be forthcoming from other scholars. In any event, it is hoped that the work already accomplished will be useful in further investigation of the Book of Mormon. We have already shown the effectiveness of Joseph Smith's system of transliteration and its bearing as evidence of the two major peoples of the Book of Mormon. Further investigation of Book of Mormon proper names will give additional insights into the Record and its original languages.

GLOSSARY
By John Robertson and Ruth R. Christensen

allophone. Any of the variant forms of a phoneme (class of sounds) as conditioned by position or adjoining sounds, e.g., (pʰ) in *pill* and (p) in *spill* are allophones since (pʰ) always comes in initial position, and (p) must follow (s). Allophones are written between square brackets to show that they are not phonemic, but phonetic symbols.

Alpha and Omega. The first and last letters of the Greek alphabet, used in the Bible to describe the Eternal One (i.e., the beginning and the end).

cureloms and cumoms. Animals known by and useful to the Jaredites. It has been speculated that they are the mammoths and mastodons of modern scientific literature.

fricative. A consonant formed and pronounced by forcing the outgoing breath through a narrow opening between the teeth, lips, etc., as *f, s, v,* and *z,* characterized by local frictional sounds.

furtive patah. When in Hebrew any short vowel before a final guttural becomes a short *a*, and between any long vowel and the final guttural there steals in the sound of short *a*, this is called the *furtive patah*. It is like the *a* sound in English *here* (heᵃr) and *fire* (fiᵃr).

Hebraisms. Idioms, attributes, or modes of thought which pertain to the Hebrew language and culture.

Israeli Hebrew. The ancient Hebrew tongue, revived and used by the modern inhabitants of the land of Israel and taught to Jews everywhere.

intervocalically. Occurring between vowels.

pharyngeal. Sounds produced when the root of the tongue is pushed as far back and down as possible, as in Arabic and Hebrew ʿayin.

phoneme. A minimal unit of sound that distinguishes meaning in a word or utterance, e.g., /p/ vs /b/ in *pill* and *bill*. A phonemic symbol is enclosed between slanted lines, as illustrated.

phonetic. The inventory of all the perceptively different sounds of a language is a phonetic and non-functional difference.

phonological structure. The interrelation of parts in the sound system of a language.

RLDS. Referring to the usage of the Reorganized Church of Jesus Christ of Latter-day Saints, with headquarters at Independence, Missouri.

resonant. A sound produced when the breath stream has free passage through the vocal tract: the organs of articulation neither stop nor constrict its passage. They are *m, n, ny,* (nasals); *w, y,* (glides); *l, r,* (liquids); and vowels.

stop. Speech sound articulated by a complete stoppage of air in the vocal tract, e.g., *p, b,* t, d, k, g, c, ʔ

bilabial stop. Complete stoppage of air at the lips, e.g., *p, b.*

glottal stop. A speech sound produced by a momentary complete closure of the glottis and then releasing the impounded breath, recorded by a curl sign (ʔ) It is commonly heard in *my? aunt, oh?oh,* and *hot water* (haʔwaDer) were the *t* of *hot* is not spoken as a *t.*

syntactic. According to the rules of sentence structure and word relations.

transliterate. To represent in the characters of another writing system.

uvular. Sounds such as the French *r,* produced when the small flexible flap (uvula) which hangs down from the back edge of the velum, is contacted by the dorsum of the tongue.

velar. Sounds articulated with the back of the tongue, e.g., *k, x, g, ʕayin.*

voiceless. Production of a speech sound without vibration of vocal cords, e.g., *p, t, x, s.*

voiced. Vibration of vocal cords during the production of a speech sound, e.g., *b, d, g, z,* etc.

141.1 BYU EXCAVATES AT TEL MICHAL, ISRAEL.

By the editor and Ruth R. Christensen. Thirty-four students representing BYU, led by Bruce W. Warren, BYU assistant professor of anthropology and archaeology, and LeGrande Davies, BYU instructor in ancient scripture, participated in the 1977 season of excavation at Tel Michal, Israel. Under excavation director, Dr. Ze'ev Herzog of Tel Aviv University, Mr. Davies and John Nelson, a BYU graduate student in archaeology, served as area supervisors; Professor Warren conducted a field survey of the surrounding area to discover the extent of the site; Brent Harmon did an instrument survey of the site; and Richard Hansen, advanced undergraduate, and Glenna Nielson, graduate student, both in archaeology, served as assistant area supervisors. All these persons were on the excavation staff. Howard Kempton, BYU instructor in ancient scripture, served as spiritual advisor of the BYU group. Participating institutions were Tel Aviv University, Israel; Brigham Young University; University of Minnesota; University of Pennsylvania; Macquarie University, Australia; and the Herzliya Municipality, Israel. More than 80 students participated in the field school and educational program.

Fragments of Cypriot "milk bowls" were probably the most important find of the season. They helped date the particular strata in which they were found to the Late Bronze period; they also, of course, were evidence of influence from the nearby island of Cyprus. Another significant discovery was the *terre-pisé* (tamped earth) rampart covered with a stone glacis in the lower city, which dates this stratum to Middle Bronze IIB (1750-1550 BC), the time of the Hyksos presence when the natives were fortifying their towns.

Tel Michal is a rather small archaeological site about six kilometers north of modern Tel Aviv on the Mediterranean coast of Israel. It is located near the Via Maris, the ancient highway connecting Egypt on the southwest with Syria, Asia Minor, and Mesopotamia on the north and east. It was also at the edge of Philistia from about 1150 BC until David conquered that territory in the tenth century BC. Occupation levels from about 4500 BC until modern times have been discovered. Architecture and ceramics recovered during the 1977 season represent the Chalcolithic, Early Bronze, Middle Bronze, Late Bronze, Iron I, Iron II, Persian, Hellenistic, Roman, Byzantine, and Arab occupations. The site shows great promise; it is but a part of a large project—researching the southern Sharon-north Philistine coast. Although no Philistine occupation at the site could be recognized, perhaps the forthcoming 1978 season will reward the archaeologists with such evidence.

141.2 NOTED BIBLE SCHOLAR PASSES.

By Ruth R. Christensen. Dr. Sidney Branton Sperry, called "pioneer to the past for Latter-day Saints" (see below), accomplished writer, lecturer, and scholar of the Scriptures and advisor to the SEHA Board of Trustees, passed from this life on September 4, 1977, at Provo, Utah. Funeral services were held September 9, in the auditorium of the Joseph Smith Memorial Building on the BYU campus.

At the time of his death he was professor emeritus of Old Testament languages and literature at BYU and had been an Elective Life Member of the SEHA since 1950.

He was born December 26, 1895, at Salt Lake City, Utah, attended local schools, and graduated from the University of Utah with a major in chemistry and a minor in geology. He taught mathematics, chemistry, and physics in high school; he was a talented organist.

In 1922 Dr. Sperry pioneered seminary classes in Ogden, Utah. He also opened seminary and institute classes in Pocatello, Idaho.

In 1932 he graduated from the University of Chicago with the Ph.D. degree in oriental languages and literature; he spent the following year studying biblical archaeology in Jerusalem at the American School of Oriental Research.

He joined the BYU faculty in 1932; beginning in 1934 he taught classes in biblical archaeology. In 1953 he led the first tour of the Holy Land ever conducted by BYU Travel Study. He served as director of the Division of Religion for many years, then as director of graduate studies in religion. Although he was offered more lucrative positions elsewhere, his vision of the growth and destiny of this university led him to give to it his best efforts.

It was in September, 1976, that Ross T. Christensen read a paper, "Archaeology of the Scriptures at Brigham Young University as Seen at the Twenty-fifth Annual Symposium," in which he called Dr. Sperry the "pioneer to the past for Latter-day Saints." Dr. Christensen explained, "he was the first serious student of the ancient Near East to appear among Latter-day Saints since the days of the prophet Joseph Smith."

Beginning in 1959 and until its incorporation in 1970, Dr. Sperry served as a general officer of the SEHA. He participated in the Annual Symposium and was a member of the Symposium committee a number of times. He was honorary chairman in 1971 and 1972.

Dr. Sperry has authored many books and articles and has long been a popular lecturer on scriptural subjects at BYU, in classes of both the Division of Religion and the annual Education Week.

The final paper read at the Twenty-sixth Annual Symposium (see 141.3, below) was a memorial to Dr. Sperry and his accomplishments.

141.3 **TWENTY-SIXTH ANNUAL SYMPOSIUM HELD.** By Ruth R. Christensen. The Twenty-sixth Annual Symposium on the Archaeology of the Scriptures and Allied Fields was held on Saturday, October 8, 1977, in the J. Reuben Clark Law Building on the BYU campus. Some 134 people heard and discussed nine papers.

Dan C. Jorgenson, MBA, regional representative of the LDS church for Switzerland ·and the German Democratic Republic (East Germany), former mission president in north Italy, and formerly employed in Italy by the City Bank of New York City, presented the first paper, NEW FACTS ON THE LIFE AND HISTORY OF GIOVANNI PIETRO ANTONIO LEBOLO.

Other papers presented in the morning session were Dana M. Pike, advanced major in archaeology at BYU, JONAH'S NINEVEH: IS THERE A HISTORICAL SETTING?; Paul R. Cheesman, DRE, BYU associate professor of religious instruction, MULTIPLE MIGRATIONS OF THE ANCESTORS OF THE AMERICAN INDIAN ANALYZED; and Diane E. Wirth, BYU graduate in art education, HORSES AND CHARIOTS IN ANCIENT AMERICA.

Ross T. Christensen, Ph.D, professor of archaeology and anthropology and SEHA secretary and treasurer, reported the possible discovery of the Book of Mormon place-name Nahom on an eighteenth-century map.

Luncheon in the Wilkinson Center was accompanied by a multi-media presentation on the Holy Land with narration by Robert C. Taylor, under the direction of Dann Hone of BYU Travel Study.

Afternoon papers were presented by Bruce W. Warren, MA, BYU assistant professor of anthropology and archaeology, REPORT ON BRIGHAM YOUNG UNIVERSITY'S SPONSORED DIG AT TEL MICHAL, ISRAEL (see this newsletter, 141.1); Benjamin Urrutia, of Guayaquil, Ecuador, BYU graduate in anthropology, SHIBLON, CORIANTUMR, AND THE JADE JAGUARS (read by Dr. Christensen); Brant Gardner, BYU-NWAF research associate, ST. THOMAS IN THE NEW WORLD: THE EFFECT OF THE SPANISH ON THE NATIVE LEGENDS OF QUETZALCOATL (read by Professor Warren); and Ellis T. Rasmussen, Ph.D, BYU dean of religious instruction, MEMORIAL IN HONOR OF SIDNEY B. SPERRY (see this newsletter, 141.2).

An invocation was offered by H. Don'l Peterson, Ed.D, BYU professor of ancient scripture. Bruce Porter, advanced undergraduate in western Asian studies at BYU, offered the benediction.

Victor L. Ludlow organized the Symposium as chairman. Ross T. Christensen was honorary chairman. A. Delbert Palmer conducted the sessions as acting chairman. Other members of the Symposium committee were Ruth R. Christensen, M. Wells Jakeman, Fred W. Nelson (printed program), Dana Pike (publicity), Bruce Porter (physical arrangements), and Bruce W. Warren.

The Symposium was co-sponsored by the SEHA and the BYU Department of Anthropology and Archaeology. Admission was free.

Selected papers read at the Symposium will appear in forthcoming issues of the *Newsletter and Proceedings*.

141.4 ELECTION MEETING FOLLOWS SYMPOSIUM. By Ruth R. Christensen. The annual business meeting of the Society was held on October 8 immediately following the Annual Symposium (see above, 141.3).

All 11 incumbent trustees were re-elected for a one-year term of office, as also Virgil V. Peterson and Esther P. Ainscough.

Mr. Peterson was re-elected to the Board of Trustees following his return from the California-San Diego mission of the Church of Jesus Christ of Latter-day Saints. He and Mrs. Peterson served for 18 months as guides to the Mormon Battalion Memorial Visitors Center.

Mr. Peterson, a member of the SEHA since 1953 and a Life Member since 1957, was director of the Salt Lake Chapter of the Society from 1959 to 1962. Thereafter, he continued to serve as a general officer until 1970, when he became a trustee and one of the original incorporators of the SEHA (Newsletter, 62.3, 82.1, 123.2).

In June, 1962, he became the Society's vice-president, then served as president from 1965 to 1968. During his presidency the SEHA constitution was rewritten and ratified. The Society's legal incorporation in 1970 was largely due to his leadership (Newsletter, 82.0, 96.0, 109.2, 110.1, 121.0).

Mr. Peterson also served on the committee for the Annual Symposium several times and was chairman in 1970, at which time Dr. Cyrus H. Gordon of Brandeis University became the first guest speaker, with "America and the Ecumene of the Old Testament" (see Newsletter, 120.0, 125.0, 136.0).

Mrs. Ainscough, of Kaysville, Utah, was elected the Society's thirteenth and newest member of the Board of Trustees.

Mrs. Ainscough is a free-lance writer, president-elect of the League of Utah Writers, research writer for the Teachers Resource Center of the University of Utah Museum of Fine Arts, first vice-president and program director since 1968 of Archaeology and History Associates (formerly the Salt Lake Chapter of the SEHA; see Newsletter, 121.3), and member and Research Patron of the SEHA since 1958. She is also a teacher at Sunset Elementary School, editor of a four-stake newspaper, director this year of all publicity for the League of Utah Writers, and a public information officer for the American Association of University Women. In her spare time she has worked as a bookkeeper, secretary, and chemical engineer, and is pursuing a master's degree in education.

141.5 NEAR EASTERN EXPERT LECTURES AT BYU. By Ruth R. Christensen. Dr. Anson F. Rainey, associate professor of ancient Near Eastern cultures at Tel Aviv Uniersity, Israel, and professor at the Institute of Holy Land Studies, Mt. Zion, Jerusalem, gave a series of lectures at Brigham Young University on March 23 and 24, 1977. His visit to the campus was co-sponsored by the SEHA, the departments of Anthropology and Archaeology and of Ancient Scripture, and other campus groups. All Society members were invited to attend.

Dr. Rainey's topics were FARMERS, WEATHER, AND GODS (a study of Canaanite religion); BEERSHEBA: EXCAVATING A BIBLICAL CITY (illustrated with slides); NEW DISCOVERIES AT THE BIBLICAL CITIES OF ARAD AND APHEK (illustrated with slides); and BRINGING BIBLICAL STUDIES DOWN TO EARTH (illustrated with slides). A reception honoring Dr. Rainey was held in the evening of March 25.

Dr. Rainey is the holder of seven degrees in Near Eastern history, languages, and archaeology. He has published some 40 books and articles on Near Eastern and biblical subjects. He has participated in ten seasons of archaeological digging at sites of Old Testament cities, and has lived in Israel since 1962.

According to Professor Bruce W. Warren, BYU and the SEHA were very fortunate to have this renowned scholar speak on the campus, especially since Brigham Young University has just undertaken a program of archaeological field work in Israel in collaboration with Tel Aviv University (see this newsletter, 141.1).

141.6 ARTICLE ON EARLY HISTORIES OF THE BOOK OF MORMON AREA MAILED TO MEMBERS. By Ross T. Christensen. Copies of a seven-page article about early historical works on ancient Mesoamerica were mailed recently to all members of the SEHA as an additional membership benefit.

In "A Survey of Pre-1830 Historical Sources Relating to the Book of Mormon," by David A. Palmer, reprinted from *Brigham Young University Studies*, Vol. 17, No. 1 (Autumn, 1976), pp. 101-107, the works of ten early scholars who researched the ancient history of the Book of Mormon area, are discussed.

Certain detractors of the Mormon prophet Joseph Smith, Dr. Palmer notes, have claimed that he published the Book of Mormon as "simply a fanci-

ful rewriting of already available material." This material was in the form of historical works on pre-Columbian Mesoamerica by early Indian and Spanish writers. By systematically examining what information was given in the early chronicles and histories that were available in 1830, when the Book of Mormon was published, the author demonstrates that neither Joseph Smith nor anyone else in the world at that time had access to any Indian or Spanish source from which the Book of Mormon could have been adapted.

However, in view of Dr. Palmer's objective as stated in the opening paragraph (that of examining what information from the early chronicles was available to Joseph Smith in 1830) and in view of the clear result of that examination (that none was available), a concluding paragragh pointing this out would have been in order. As it is, the reader may finish the article with the feeling of having been enlightened but without realizing that the author has provided powerful support for the Prophet's position.

Also, in touching on the crucial subject of Book of Mormon geography the author refers (footnote 1) to unpublished manuscripts on that subject by two former students at BYU. These two, as well as Dr. Palmer himself, studied archaeology under M. Wells Jakeman, founder of the BYU Department of Archaeology. But no mention is made of Dr.

Jakeman's more detailed manuscript on the same subject, which has taken him a lifetime to prepare and which hopefully will be ready soon for publication.

Incidentally, a short article in the field of Dr. Palmer's study, published a number of years ago, also could be cited: "Mesoamerican Chronicles," in *Newsletter and Proceedings of the SEHA*, No. 91 (October, 1964; later reprinted in Ross T. Christensen, ed., *Tree of Life in Ancient America*, pp. 2-3). In this, Dr. Jakeman explains in clear, brief language what the Mesoamerican chronicles are and summarizes the pre-Spanish history they preserve. It is a statement which any student of the Book of Mormon will recognize at once as significant. The early chronicles indeed contain important Book of Mormon parallels, but the point is that they were not available to Joseph Smith at a time when he could have used them.

Dr. Palmer, a chemical engineer, and an SEHA member since 1962, has authored or co-authored papers read at the Annual Symposium in 1966 and 1974 (Newsletter, 103.6, 137.1). In fact, he comes from a family background of enthusiastic support and service to the SEHA. (His father, A. Delbert Palmer, is its present vice-president.)

Additional copies of Dr. Palmer's paper are available at the SEHA office. Members may obtain them under their "free past publications" privilege.