Surveying Patterns of Noun Plural in Jibbāli

Khalsa al-Aghbari
Sultan Qaboos University

In Jibbāli, noun plurals exhibit two types of plural markers with numerous phonological alternations. There are nouns with explicit plural suffixes, nouns with internal change, plurals with a suffix and change combined, nouns taking a template and plurals with two suffixes combined. Due to Jibbāli's phonological peculiarities affecting the plural, proliferation in plural patterns is expected. For example, a deleted b in a singular decides to reoccur in the plural, assigning a distinct plural pattern. Being in contact with Arabic, due to physical proximity, Jibbāli borrowed internal plural forms from Arabic and imposed intriguing alternations into them. For example, Jibbāli's Vb infixed plurals historically derive from the Arabic plural infix -wa:-. This is another reason for the multiplicity of plural patterns in the language. Jibbāli plurality is also characterized by doubly and triply marked plurals. For example, some Jibbāli singular forms take double plural markers (i.e. suffixation and Vb infixation together or two suffixes consecutively following one another). This study is a linguistic attempt to document the diverse patterns of noun plurals in Jibbāli, a critically understudied language in the literature to date. It uncovers plural patterns that are unique to the language, revealing historical and phonetic affiliations to Arabic, Modern South Arabian and Semitic.

1. Introducing Jibbāli

Jibbāli is a Semitic language and one of the Modern South Arabian (henceforth, MSA) languages. Other MSA languages include Mehri, Ḥarsusi, Baṭhari, Hobyot and Socotri[1]. According to Rubin (2007), MSA languages occupy an independent branch of West Semitic since they are distinct from Central Semitic which has developed the indicative form that MSA languages lack. MSA languages have long been grouped with Ethiopian Semitic due to notable shared features such as the presence of imperfective (Rubin 2007). However, Rubin, who questioned whether these features are "shared retentions from Proto-Semitic or are the result of areal phenomena" (pp.93) is not in favor of such a grouping. It is unfortunate that these languages receive little linguistic attention, which makes it hard to determine with certainty their internal subgrouping. Based on Rubin, Ḥarsusi and Baṭhari are closely related to Mehri since they have developed similar linguistic tendencies which Jibbāli and Hobyot resist. Rubin argues that Soqotri is "the most typologically divergent of the languages" (pp.93) due to the isolation and limited physical existence it enjoys. These facts about MSA languages have led Rubin to adopt Lonnet's classification (2006) illustrated in the following representation:

---

[1] Mehri is spoken in the southern parts of Oman and Yemen. Ḥarsusi speakers originally come from Jidat Al-Ḥarāsīs in Oman while Baṭhari is spoken on the coast of the Ḥalāniyyāt Islands. Hobyot is widely found at and around the border shared between Oman and Yemen. In Yemen, Socotri speakers reside.

Proto MSA

      Western MSA (Mehri, Ḥarsusi and Baṭḥari)
                     ??Hobyot??
      Eastern MSA (Jibbāli and Socotri)

As seen in the classification above, Jibbāli is one of the Western MSA languages which as a group belongs to West Semitic. There is much doubt with regards to the subgrouping of Hybot which has heavy influence from both Mehri (Western) and Jibbāli (Eastern).

Jibbāli is widely spoken in the mountains and coastal plains of Dhofar (Ḍufār, in Arabic), a governate in the southern region of the Sultanate of Oman. Geographically, it stretches from Ḥāsik in the farthest east to Ḍalkūt in the farthest west and is primarily spoken in the cities, towns and villages of Ṣalālah, Mirbāṭ, Ṭāqah, Raysūt and Ḥalāniyyāt Islands. Jibbāli is also spoken in sporadic areas situated at the boarder shared between Dhofar and Yemen (Lonnet 1985:50; Hofstede 1998:13).

Various names designate this language; for instance, Jibbāli is equally known as Shehri (pronounced as [ɬəħri] with an initial voiceless lateral fricative) in reference to the region in which the language is spoken. Shehri is originally derived from the word [ɬaħr] or [ɬaħir] which means "green mountains or rural areas". Al Mashani (1999) and Al Shehri (2007) state that [ɬaħr] refers specifically to the coast between Oman and Yemen. Moreover, an alternative name to the language is [ɬəħrɛt], orthographically Śherɛt[2]. There are different arguments about this language name, but it refers to the green mountains that receive the monsoon rains. In the past, the language was dubbed as 'Qarawi' and 'Eħkili' which insinuate reference to old social and tribal differences, and which sound pejorative to native speakers of Jibbāli (Johnstone 1981; Hofstede 1998; Morris 2007).

In spite of the considerable exposure of Jibbāli speakers to Arabic through modern schools and influential Arabic dialects of local tourists and visitors on one hand and foreign languages on the other hand, Jibbālis take pride in their language and teach it as a first language to their children. This pride coupled with the isolation it enjoys (Al Mashani 1999; Al Shehri 2007) enable Jibbāli to persist as a distinct entity until today. Since Jibbāli is not written, and there is an ongoing wave of modernization exercised by the Omani government to enhance Arabicized economic development[3], Arabic remains to be the language used in writing, worship and formal education for all Jibbāli speakers.

Johnstone identifies three dialectal varieties of Jibbāli on the basis of their geography in Dhofar: Eastern, Central and Western (Johnstone 1981:xii; Hofstede 1998:14). He believes that Central Jibbāli is the most important dialect among all. It represents the original or mother Jibbāli, as other dialects have many affinities with Central Jibbāli, and only minor differences between it and other dialects exist (Johnstone 1981:xii).

2. Jibbāli Plurals: Data Collection

The singular and plural tokens collected in this study pertain to Central Jibbāli, primarily spoken in Salalah (Ṣalālah, in Arabic), the main city in the Southern region of Oman. More specifically,

---

[2] Ś, first proposed by Thomas Johnstone and later taken by Semitists who study Modern South Arabian languages to refer to a voiceless lateral fricative, stands for /ɬ/ in IPA.
[3] Arabicized economic development first appeared in Lonnet (2009).

they represent the current Jibbāli spoken by four native speakers whose ages range from 24 to 50. Jibbāli speakers are bilingual, with fluency in both Jibbāli and Arabic. Two of the four informants understand both Arabic and Jibbāli while the other two also speak English as a third language. I also took some singulars and/ or plurals from Johnstone's Jibbāli lexicon (1981) to verify with my informants.

Singular and plural forms were recorded during two principal fieldwork trips to Oman during the summers of 2009 and 2010. I arranged two or three meetings per week with Jibbāli consultants to elicit new forms and verify old ones through corrective feedback and interviews.

2.1 The Study

Unfortunately, a reliable reference on the recurrent patterns of plural in Jibbāli is lacking. Moreover, previous work (for example Ratcliffe 1996, 1998) is only limited to describing and categorizing the existing plural shapes based on their CV patterns. There is not any linguistic work that mentions the phonological and morphological operations involved in forming the plural. Past works conducted by native speakers of the language always insist on the untrue affiliation and relatedness of Jibbāli to Arabic (Al Mashani 1999; Al Mashani 2003; Al Shehri 2007). These studies base this spurious belief on the substantial amount of borrowings Jibbāli has from the dominant and surrounding Arabic and Arabic dialects. In this study, Jibbāli's noun plurals refute convincingly such beliefs and reveal different plural patterns in the language. For instance, Jibbāli does not employ the dominant broken plural shape with an extra length in the second syllable and with the canonical iamb (CV.CV:), which is widely attested in Arabic. It lacks the broken plural patterns CaGaaCiC and CaCaaGiC, whereby G is a glide, due to the lack of intervocalic glides in the language and not due to the absence of particular singular patterns.

This study is a linguistic attempt to document internal and external plurals in Jibbāli. It describes phonologically and morphological these and hints at their historical and phonetic relatedness to Arabic, other MSA and Semitic languages. The paper is organized as follows. First, it reviews past scholarship on Jibbāli plurals. It, then, describes gender in the singular-plural mapping. Next, it documents the diverse shapes of plurals revealing the phonological and morphological operations involved in their formation, the historical dimensions of these plurals and how they relate to Arabic, MSA and Semitic languages. Finally, it lists shared features between Jibbāli and other Semitic languages.

2.2 Literature Review on Plural in Jibbāli

Despite the interesting complexities involved in the plural patterns, Jibbāli plurals have not been phonologically described. The only works which briefly touch on plurals are Ratcliffe (1992, 1996, 1998a &b), Simeone-Senelle (1997) and Rubin (2014). Belova (2009) offers an interesting discussion about plural in South Semitic in general, and briefly mentions some recurrent shapes of plurals in Jibbāli and other MSA languages. Alfadhly (2008), on the other hand, describes the future and nominal plural forms in Eastern Mehri which bear resemblance to some of the recurrent plural patterns in Jibbāli.

This section reviews the major work that discusses and describes plural in Jibbāli, and outlines the knowledge gaps in the literature with respect to this pivotal research area. Most specifically, it reviews Ratcliffe (1992), Ratcliffe (1996), Simeone-Senelle (1997), Ratcliffe (1998a &b), Belova (2009) and Rubin (2014).

In his lengthy diachronic study to reconstruct a proto-language for the broken plural in Afro-Asiatic languages and Semitic, Ratcliffe (1992) surveys many languages revealing diverse patterns of plural and arguing convincingly that long -*aa* generally characterizes the broken plurals. While surveying plural patterns in MSA languages, he provides insightful discussion on Jibbāli plurals comparing them with plurals in other Southwest Semitic languages (Jibbāli was thought to belong to Southwest Semitic then) and Arabic in particular. Most relevant for the sake of this study, he argues that South Semitic and Jibbāli never express plural by reduplication which only occurs as a result of templatic expansion for bi-radical and weak roots. He also states, with illustrative examples, that Jibbāli's long vowels have evolved into short stressed vowels and their quality has been phonologically neutralized. His discussion on remnant sounds /n/ and /l/ of some plural forms provides basic understanding to the otherwise unusual behavior of some derived plurals whose singulars have no such sounds underlyingly.

Ratcliffe (1996) briefly discusses Jibbāli plurals whose second and third radical is exactly the same sound, and argues that these plurals are merely templatic expansion. He maintains that Afro-Asiatic languages do not express plural by reduplication. However, reduplication surfaces to conform to some templatic restrictions imposed by the language. He provides evidence based on the behavior of similar reduplicated plurals in other Semitic languages.

Ratcliffe (1998a) presents valuable discussion about patterns of plural in Jibbāli. He lists the diverse CV shapes of the plurals along with the most common singulars from which these plurals are derived. He further illustrates the shapes with examples and discussion on their behaviors and their general phonological tendencies. Interestingly, he observes that Jibbāli's plurals are closer to Ethiopian than to Arabic. The major observations made in Ratcliffe (1998) about plural in Jibbāli are listed in the section below.

Ratcliffe was mystified by the large number of different vowel qualities in what he calls group I plurals (i.e. plurals of CVCC masculine). There are CVCεC, CVCɔC, CVCuC, CVCeC, etc. He also questions the plurals with -*Vb*- infix (personal communication). He states "these forms all seem to go back to CVCaaC and ʔaCCaaC, but could also reflect forms with inserted /u(u)/ or short /a/" (1998b:198). Moreover, in languages where both internal and external plurals co-exist, Ratcliffe (1998b: 219-242) maintains "the internal plural is either the obligatory or at least the only productive plural for underived, unmarked nouns of three or fewer consonants (stem shapes CVC, CVCC, CVCVC), while the external plural is generally obligatory for productively derived nouns such as participles and verbal nouns". Ratcliffe, contrary to the claims that will be made in the discussion of Jibbāli plurals, assumes that the shape of the stem (input) determines the shape of the plurals (output) instead of the output singulars serving as the base for the output plurals. However, it is important to remember that Ratcliffe has a different purpose of studying plural (comparative and historical with the aim of reconstructing a proto-plural in Semitic).

Simeone-Senelle (1997:388) identifies some crucial features of plural in Jibbāli and other MSA languages as she lists the most common patterns of plural in this language and other MSA languages. Her list of the plural shapes in the language is not as comprehensive as Ratcliffe's; however, it serves a good background for common plurals of Jibbāli.

Belova (2009) discusses some plural shapes taken by Jibbāli and other MSA languages. For instance, she observes that the CuCu:C pattern is rare in MSA languages (e.g. k'un/ k'erun 'horns' in Jebbāli). Moreover, some plural patterns found in Ħarsusi correspond etymologically to the Arabic pattern CaCu:C or CiCa:C. She also argues that the plural shape [θawr]/ [heθweret] 'bulls', which occurs in Ħarsusi, is relatively rare in other MSA languages.

Rubin (2014) stated that Jibbāli exhibits two types of plurals: external and internal where the internal plural is more common. He listed a few nouns that take a suppletive plural but argued that some plurals may look suppletive due to "obfuscating sound changes" (pp.79) but are not so from a historical point of view. He also found nouns that occur only in their plural form like jɔ 'people'. As Rubin discussed the external plural, he made a division between masculine and feminine, noting that nouns externally pluralized with the suffix –in are rare in the language, and masculine singulars may take an external feminine suffix or exhibit an internal change along with a plural suffix. According to Rubin, there are two feminine plural markers -etə and -tə whereby ə can be realized as ɛ and the suffix -etə surfaces as –iti after a nasal (pp.80). He classified internal plural forms into four types: change of a vowel/ diphthong, replacement of a pattern with or without a suffix, replacement of a pattern with *Vb* infixation and change of marked feminine singulars without a feminine suffix. The current study describes these types phonologically, naming them (ablaut, templatic, *Vb* infixation and deletion respective). It, in essence, confirms to Rubin's conclusions but goes as far as relating these patterns to other MSA and Semitic languages.

The works reviewed above make crucial observations about the most prevalent plural patterns in Jibbāli. Ratcliffe's work provides insightful discussion about plurals in MSA languages (Jibbāli and H̄arsusi) and other Semitic languages. His arguments in support of the need to classify Semitic on the basis of the behavior of their plural are quite illuminating. I particularly acknowledge the way he organizes the plural patterns in Ratcliffe (1998a &b) and his thorough discussion based on the thoughtful comparison he made among plural patterns in Semitic languages.

In the following section, I describe the diverse plural shapes of Jibbāli. Discussion of these first outlines the typical, systematic and most common plurals and then moves to describe the peculiarity of the exceptional ones and those that take double and triple plural markers. Before embarking on the description of these patterns, it is worth mentioning that noun gender in Jibbāli is determined by (1) the inherent gender of the singular noun, and (2) the feminine suffix marker –(V)t. Thus, the suffix -(V)t attached to some singular forms in the data described below indicates the feminine gender, and does not contribute to the consonantal roots of these forms.

3. Suffixation

Like other Semitic and Afro-Asiatic languages, Jibbāli has external plural which attaches suffixes to singular forms. However, the resultant plural is not purely 'sound' since the suffix does not nicely attach but imposes internal changes such as vowel insertion or deletion and vocalic alternation. There are three plural suffixes in Jibbāli: -t(V) or -(V)t[4] whereby V→ /i/ or /ə/, -Vn whereby V is mostly /u/, and -i. The last suffix was a marker of duality which no longer seems an active process in the language. Only very few archaic forms continue to take this suffix and bear the dual meaning (e.g. [kul-ɛt] 'kidney, sing.' becomes [kiʒi] 'kidneys, dual.').

These plural suffixes attach to various singular shapes ranging from bi-consonantal to quadri-consonantal singulars. However, the default plural suffixes in the language are -t(V) and   -(V)t which serves as the plural marker for loan and nonce forms. These are feminine plural markers, and resemble in shape the Arabic feminine plural suffix –a:t which reveals that they historically relate to Arabic but underwent change due to Jibbāli's phonology. After these suffixes attach to

---

[4] Rubin (2014) states these suffixes as -etə and -tə (pp.80).

singular forms, a number of phonological alternations affecting the vowels, syllabic structure or consonantal quality of the singular forms occur. For example, vowel deletion and insertion occur frequently. A wide range of vocalic change is also attested in many forms. Moreover, place assimilation of the final nasal consonants in the singular forms to /t/ can be seen in the plurals with the suffix –t(V). These phonological alternations that accompany suffixation indicate that suffixation does not alone serve as a sole marker of plurality. Below, I show some representative examples of singulars which take –t(V) and –(V)t.

(1) Suffixal Plurals in Jibbāli

(1.1) The Suffix-*t(V)* or *–(V)t*

a.	ʃˤfef	ʃˤɪfɪtə	elbows
b.	batˤaħ	batˤħɪti	beaches
c.	ʔɔb	ʔabti	doors
d.	łħer	łħaretə	mountains
e.	ʔarł	ərłti	grounds/ floors
f.	lɛh	lhoti	cows
g.	łəfəl-ɛt	łəfəlɔtə	people from Dhofari
h.	ӄifr-et	ӄofɔrtə	plaits, tresses of hair

The plural forms above exhibit vocalic changes when the plural suffixes –t(V) and -(V)t attach to them. To illustrate, forms (d) and (f) inserts a vowel after the last consonant when the plural suffix attaches. Moreover, a change in the vocalic quality is observed (h) which alters a high front unrounded vowel into a back rounded. Form (a) appears to lose or degeminate an /f/ when the plural suffix gets attached.

Another plural suffix common in Jibbāli is *-un* or *-in*. Although this suffix is not as common or productive in Jibbāli as the default one, quite a few singular forms are pluralized by attaching this suffix. Moreover, this suffix is also similar to the Arabic sound plural suffixes *–u:n, a:n* and *–i:n*. However, Jibbāli does not have length in the plural suffix. Ratcliffe (1998:165), who explores plural in many Afro-Asiatic languages, states "the vowel systems [of MSA languages] have undergone changes resulting in neutralization of the contrast between long and short, high and low vowels in many environments." Moreover, it is worth pointing that the suffix *–a:n* is "widespread in Classical Arabic and other Arabic dialects; it corresponds to the external suffix of the masculine plural of adjectives and participles in Ge 'ez" (Belova 2009:310).

The singulars, which attach to *-Vn* suffix, may have two, three or four consonants in their base. There is often a vocalic contrast that accompanies *-Vn* suffixation. In other words, if the singular form has a back rounded vowel /u/ or any of its variants, the plural noun takes a front unrounded vowel /i/ or any of its variants too, as in (d) and (e) below. There are no regularities that govern the vocalic quality of the vowel in the plural suffix and what determines or drives this change is really unknown.

One may think that forms (1.2a, 1.2b) belong to ablaut not suffixation. Rubin (2014) also lists similar forms with this tendency (look for example [fədnin] derived from [fudun] 'stone' in Rubin 2014:80).

(1.2) The Suffix -*Vn*

        a. lıftın   lıft<u>un</u>   aunts
        b. gəfnin   gıf<u>un</u>   tulchans
        c. k'əla   k'əl<u>un</u>   children
        d. ðunub   ðɛnb<u>in</u>   tails
        e. dʌχtər   dıχtır<u>un</u> doctors

     The last plural suffix is formerly a dual marker –*i*. Duality is no longer systematic in Jibbāli, and many forms which have the suffix –*i* currently denote plural. Again, this suffix attaches to bi-consonantal (forms (b) and (d) below) and tri-consonantal singular shapes (forms (a)-(c)). The semantics of the forms attached to this suffix are diverse and relate to living and non-living entities. Therefore, semantics alone cannot serve as a clue to show a correlation between this plural marker and the forms they attach to it. Singular forms which have the feminine suffix -*Vt* such as forms (a) to (c) lose the feminine suffix prior to attaching the plural marker –*i*. Despite the fact that duality features are present in Jibbāli in its pronominal paradigm, the dual number is lost in nouns. This has been confirmed through personal communication with my informants. As known, Jibbāli and Omani Arabic are in close contact. The latter does no longer make a distinction between plural and dual with the latter being conflated with the plural form. In Jibbāli, the front vowel /i/ can be realized as /e/ or /ɛ/. This also applies to /u/ which alternatively surfaces as /ɔ/ and /o/. Ratcliffe (1996) made a similar observation for Jibbāli. The following examples of plurals take the former dual marker to mark plurality:

(1.3) The Suffix -*i*

        a. sˤəfr-it   sˤofor<u>i</u>   cooking pans
        b. haʒ-at   haʒ<u>i</u>   black flies
        c. k'esˤ-ɛt   k'esˤ<u>i</u>   cliffs/ mountain edges
        d. ılik   ilkɛ   angels

3.1 Vb Infixation

In Jibbāli, the most systematic and widely attested plural pattern involves infixation of *Vb*. Nouns taking the *Vb* infix belong to the masculine class, and tend to relate to tools, gear and equipment in general. Arabic loan words pertinent to tools such as [masˤtˤˤr-ah/ masˤabtˤər] 'rulers, sing./pl.' are also observed to take this pattern. Therefore, *Vb* infixation is productive within this semantic sphere.

     This plural shape exhibits infixation of *Vb* exactly after the third segment of the singular form. The infix constitutes the second syllable from the left edge of the plural form. The majority of quadri-consonantal singular forms take this plural (forms (a-d) below). However, it is important to note that not every quadri-consonantal form takes the *Vb* infixation since a large number of quadri-consonantal singular forms take instead the default plural suffix –*tV*.

     The shape of the singular form is CVCCVC which becomes CVC**Vb**CVC after they pluralize. The vowel in the infix can be {a} or {ɛ} based on the place features of the preceding consonant. When the consonant is a pharyngeal, pharyngealized or glottalized, the V of the infix is mostly a. However, if the preceding C is a coronal, velar as in (b) or bilabial, the vowel of the

infix is ɛ. The *Vb* infix in Jibbāli is comparable to Mehri *-aw-*. The realization of *b*, rather than *w*, is attributable to the phonology of Jibbāli which alters w into b in pre- and post-consonantal contexts (also called phonologically *w strengthening). This pattern may also be historically and phonetically linked to Arabic internal plural (fawaːʕil, e.g. [sawaːħib] 'friends' derived from 'saːħib'). Initially a plural was formed with the infix *–aw-* which later converts into *Vb* due to an active strengthening process in the language which turns /w/ into /b/. The final vowel of the plural form varies between a schwa and /a/. I observe that /a/ is realized when the preceding consonant back, pharangealized or velarized.

(2) Plurals with *Vb* Infixation

(2.1) Regular *Vb* Infixed Plurals

a.	mɪrɫʼun	mirɛbɫən	the top parts of legs
b.	mɪgnam	migɛbnəm	mattresses made of leather
c.	sˤɪndikʼ	sˤinɛbdekʼ	boxes
d.	mərtˤum	mirɛbtˤam	pots used to keep ghee

4. Borrowing from Arabic and Jebbāli Morphological Modifications

Vowel-initial singulars take *Vb* infixation to mark plurality (examples (a-d) below). All the examples collected are loan words borrowed from Arabic. They begin originally with a nasal /m/ which is deleted word-initially in Jebbāli (Johnstone 1981; Nakano 1986; Hofstede 1998) on the prefixation of the definite article /ɛ/, which places /m/ intervocalically, and causes the deletion of the labial (also affects /b/ and /w/).

   After {m} deletes in the singular form, the following vowel nasalizes and/ or lengthens. The tri-consonantal singular (underlyingly quadri-consonantal) becomes [ĩːCCVC] and it is, in fact, the derived version of /mVCCVC/. There are two plural shapes for those singular forms: one plural shape with an initial schwa and the other retrieves the deleted /m/. So, the resultant plural may be əC**Vb**CVC or mVC**Vb**CVC.

(2.2) Singulars with an Initial Deleted {m}

a.	ĩftəħ/ mɪftəħ	əfɛbtəħ/ mɪfɛbtəħ	keys
b.	ĩktəb/ mɪktəb	əkabtəb/ mɪkabtəb	offices
c.	ĩtˤʕam	ə tˤabʕam/ mɪ tˤabʕam	restaurants
d.	ĩglɪs/ mɪglɪs	əgɛblɪs/ mɪgɛblɪs	rooms for guests

The last group of singulars that takes the *Vb* infix begin with consonant cluster CC word initially (forms (a) and (b) below). I observe that a cluster of two consonants are tolerated word-initially in Jibbāli. Some of the plurals which belong to this pattern take the shape CCVC. Others are bi-consonantal with the shape CVC. The resultant shapes of the plural are also diverse. Plural forms (c) and (d) below lose the vowel in the infix and maintain only the *b*; they take the shape (V)C**b**VC. In forms (c) and (d) below, /b/ is not infixed but rather not realized in the singular due to intervocalic deletion.

(2.3) Other *Vb* Infixed Plurals

      a. lgɛm   milabgəm   muzzles
      b. tɬ'ad   tɬ'bed   Zizyphus spina Christi
      c. tˤɛl   ɛtˤbɔl   drums
      d. χɛr   χbɔr   news

4.1 Attachment of a Suffixal VC Template

As a shared anomaly common to many Afro-Asiatic languages, nouns with one or two stem consonants tend to acquire a third consonant in the plural by reduplicating a consonant from the base. For instance, Belova (2009:310) reports some Arabic dialects and Ethiopian Semitic languages that mark plural by reduplicating the third or final radical, including the Arabic dialects of Upper Egypt (e.g. [bnitta] for [bint] 'girl', Sudan (e.g. [usudda] for [asad] 'lion', Nigeria (e.g. [duggunne] for [digin] 'beard/ chin'), the region of Lake Chad (no example therein is supplied), Amharic (e.g. [wɔndəmam-atʃ] for [wɔndəm] 'brother'), East Gurage (e.g. [alagāgo] for [alaga] 'stranger') and Soddo (e.g. [gurazazä] for [gurz] 'old man').

    Ratcliffe (1996) argues that this tendency can be explained in terms of templatic expansion whereby an extra consonant is realized in the plural in order to meet templatic constraints required by the language. He further argues that the extra consonant can be one of three "things" (using Ratcliffe's word): default, a consonant normally used as an affix such as /t/ which indicates the feminine gender in Semitic or a copy of the stem consonant.

    In Jibbāli, reduplicating the final consonant in the base is observed to be a systematic plural. Bi-consonantal singular forms of CVC shape exhibit partial suffixal reduplication $(V)CC_x \cap C_x$. Most of the collected plural forms taking this pattern are, by and large, borrowed from Omani Arabic.

    The single vowel in the singular form varies greatly while most of the plural forms consistently have /ɔ/ between the last stem consonant and the reduplicated final consonant in the plural. Only three forms in the collected data have /ɛ/ or /e/ in the suffixal reduplicant (forms (g-i) below).

(3) Partial Suffixal Reduplication

      a. ħut   ħtɔt   fish   m
      b. nuf   nfɔf   selves   m
      c. rɛf   ɛrfɔf   shelves, racks, bulks   m
      d. mus   ɛmsɔs   razors   m
      e. kɛf   ɛkfɔf   palms of the hand; claws m
      f. ħag   ɔħgɔg   pilgrims   m
      g. ħel-ɛt   ħelɛl   dry leaves   f
      h. χel-ɛt   χelɛl   lavatories   f
      i. hab-ot/ hib-ot hbeb/ heb   songs   f

The 'initial' vowel in the plural shape (forms (c-f) above) does not occur in all the plurals with the suffixal template. In some forms, the initial inserted vowel harmonizes with /ɔ/ in the reduplicant suffix (form (f) above). Singular forms taking this plural belong to different classes;

whether the forms are masculine or feminine, it does not matter. In the data collected, there is a single mono-consonantal form which pluralizes by taking the suffixal template with partial reduplication and a pre-specified vowel. With the exception of form (i) above, which bears the template CC_xVC_x and takes on the shape $(V)CC_xVC_x$. The vowel placed between square brackets is *inserted*. This form bears the shape CV whose single C reduplicates resulting in $VC_xɔC_x$. The example is [ʁa, eʁɔʁ] 'brothers'.

4.2 Ablaut/ Vocalic Opposition

One of the most prevalent plural shapes in Jibbāli involves ablaut or vowel opposition. This tendency toward reversal of vowel quality can also be observed in Arabic and Ge 'ez (Ratcliffe 1998:167). Ratcliffe (1998:200) states that "most four-consonant masculine [nouns] with /e/ or /i/ in the last syllable have the vowel alternation type". I classify the plurals taking ablaut into two major shapes. The first shape affects singular forms which have three or four root consonants (forms (a-d) below) and the second shape concerns the resultant bi-consonantal plural shape CVC (e-g). In the first shape, the last syllable of the plural form has a vowel different from that in the last syllable of the singular form. In the majority of forms, back vowels appear in the plural.

(4) Ablaut or Vowel Opposition

a. ʔɔtim	ʔıtɔm	orphans (m.)
b. sˤafrir	sˤ əfrɔr	flowers
c. χadər	χədor	isolated homes
d. χatˤık'	χatˤok'	dresses
e. nid	nud	water skins
f. k'ud	k'ad	ropes
g. ʁeg	ʁag	men

The second shape of ablaut plurals (examples e-g above) is derived from diverse singulars which can mostly be bi-consonantal or tri-consonantal. However, the plural is always CVC with an obvious change in the vocalic quality.

4.3 Templatic Plurals

4.3.1 Plurals derived from geminated singulars

The fourth systematic plural concerns the plurals derived from geminated singular forms which take a definite templatic shape. In the plural forms, the gemination is broken up by a vowel /ɛ/ or /e/. Singulars of the shape CVC_xC_x derive this plural. The vowel in the singular varies among /a/, /ɛ/ and /ə/, resulting in CVC_xVC_x.

(5) Plurals Derived from Geminated Singulars

        a. məll-ɛt   milɛl   pots
        b. k'all-ɛt   k'elɛl   hilts (of swords)
        c. dəkk-ɛt   dəkek   benches outside a house

4.3.2 Plurals with truncation and templatic expansion

Jibbāli has two distinct morphological operations which mark plural in a wide range of words: truncation and templatic expansion. These affect diverse singular shapes (can be bi-, tri- or quadri-consonantal). Templatic expansion involves an extra syllable or consonant in the plural.

(6) Templatically Expanded Plurals

        a. χof-ɪt   χalif   windows
        b. kɛr   e:kwar   chiefs
        c. ɪkber   məkbɔr   sweethearts
        d. faʕɔr   faʕjɔr   young bulls

On the other hand, the truncated plural exhibits fewer consonants or fewer syllabic structures than those contained in the singular form. Since this language involves a lot of deletion, it is possible to think of the extra syllable or consonant in the plural forms as reappearance or retrieval of the deleted segment in the singular.

(7) Truncated Plurals

        a. e:sˤbaʕ   e:sˤoʕ   fingers
        b. k'uʕdɛn   k'ɔʕɔd   camel-calves
        c. muχbutˤ   moχotˤ[5]   cartridges
        d. e:rbɛħ-t   e:roħ   fans
        e. mk'albətˤ   k'albetˤ   turnings on a path

The last most miscellaneous pattern of plural in Jibbāli involves an internal change. However, the change is very eclectic in nature to the extent that it is very hard to establish a generalization. The internal change characterizing these forms can be described as templatic in nature. Plurals belonging to this category are mapped onto three basic templates: CVCVC, CVCC and CCVC.

---

[5] Due to intervocalic deletion of /b/, the forms (c) and (d) lack /b/ in their plural formation.

(8) Templatic Plurals

(8.1) Plurals Taking the Shape CVCVC

        a. bʕal-ɛt   bəʕɛl   female possessors
        b. salʕ   seʤəʕ   cheeks
        c. əshib   sahab   waves
        d. gɪlɪl-t   gɪlil   rifle bolts

(8.2) Plurals Taking the Shape CCVC

        a. dɪmʕ-ut   dmaʕ   tears (loan word from Arabic)
        b. sɛkən   skun   communities

(8.3) Plurals Taking the Shape CVCC

        a. χabz-ɛt   χɔbz   bread (loan word from Arabic)
        b. kəlθ-ot   kəlθ   stories

In Jibbāli, there are a few plurals which have metathesis; others have a consonantal shift. However, the shift of consonant is not clear or easily identifiable. In other words, much morphophonology characterizes these forms. Observe the following examples:

(9) Miscellaneous Shapes

        a. səbrin/ səbr-at   səbro   ghosts
        b. reʃ   ereʃ   heads
        c. ħɪnɬatˤ   ħɪnɬab beads
        d. ɔrχ   erɔχ   months
        e. ɬaχar   a:ɬχar old men

Jibbāli has a distinct group of plurals which take two or three plural markers. These plurals may have two plural suffixes consecutively following each other (examples (a-c) below) or can take the *Vb* infix along with the default plural suffix –*tV* (forms (d) and (e) below). The plural form (f) is the only form that bears three distinct plural markers.

    The plurals marked by two or three plural markers are very few. I observe that the plurals taking double plural markers are native to Jibbāli and are not borrowed from Arabic. I also observe that plurals taking more than one plural suffix do not designate special semantics or add emphasis to these forms. More specifically, they do not mean 'a great many' or 'lots of different' (as the "plurals of plurals" of Classical Arabic[6] (e.g. [bayt] 'house, sing.' → [buyu:t] 'house, pl' → [buyu:ta:t] 'a great many houses/ lots of different houses'), and in Yemeni dialects too (e.g. [bint] 'girl, sing.' → [bana:t] 'girl, pl' → [bana:wit] 'a great many girls/ lots of different girls').

---

[6] As a native speaker of Omani Arabic, 'plural of plural' nouns sound archaic to me, and are not used in this variety of Arabic. However, Arabic dialects of Yemen, Moroccan and Iraq may often use 'plural of plural'

(10) Plurals Bearing Two to Three Plural Markers

a. dɪʃdeʃ-t	diʃdaʃo**n**tə/ diʃduʃ	-un + -t(V)	traditional males' outfits
b. səħar-ah	səħar**un**ti	-un + -t(V)	traditional wooden boxes
c. zol-it	zol**un**tə	-un + -t(V)	carpets
d. kɔf-et	kofɔ**n**tə	-ɔn + -t(V)	caps

Like many Afro-Asiatic languages, Jibbāli has a number of lexicalized plural forms whose singulars and plurals are vastly unrelated. These plurals, though unsystematic, seem to be semantically interrelated. Those relate to humans and living entities. Below, I list suppletive or lexicalized forms.

(11) Suppletive Plural Forms

a. tɛθ	ʔiʲnɛθ	women
b. ɪmbera/ mˋbera	ərɬi/ ərɬot	boys
c. ber	ʔiʲni	sons
d. brɪti	ʔonti	daughters

It can be drawn from the data above that Jibbāli has a large number of external and internal plurals. These exhibit many phonological changes such as vocalic change, vocalic deletion, insertion and consonantal assimilation.

5. Gender in Singular-Plural Mappings

In exploring plurals in Jibbāli, I investigated if gender is a direct determinant for the resultant plural pattern. I also studied the gender of a number of plurals when they combine with descriptive words (adjectives) to check if there is a difference between the gender of nouns and that of the adjectives describing them. Do nouns change their gender when they are pluralized?

In Jibbāli, singular and plural nouns can either be masculine or feminine. Gender is indicated by either (1) the inherent gender of the noun (e.g. ʁeg 'man$_{sing.\ masculine}$', ʁag 'man$_{pl.\ masculine}$' and e:d 'hand$_{sing.\ feminine}$') or (2) the suffixes –tV which marks the feminine gender (e.g. ʕantə 'eye$_{pl.}$ $_{feminine}$) and –Vn which refers to the masculine gender (e.g 'ʕofrin' 'cloud$_{pl.\ masculine}$', foduun 'stone$_{sing.\ masculine}$' and fidnin 'stone$_{pl.\ masculine}$'). I also observe that Jibbāli speakers assign the plurals with *Vb* infixation to the masculine gender. Therefore, it is not enough to look at the morphology on the individual nouns to determine their gender. They need to appear in clauses to check agreement patterns.

In (12) and (13), I list nouns with adjectives to check if there is any gender distinction in the singular-plural mappings. In (12), the singulars and plurals with their adjectives belong to the feminine gender. In (13), the singulars and their plurals with their adjectives are masculine. The feminine and masculine suffixes are **bold-faced**.

(12) Feminine:

Sing.	*Pl.*	
a. ləhj-**it** ħɛr-**ot**	lhoɪ/ lħa ħɛrə-**tə**	black beards
b. ʕʰen ħɛr-**ot**	ʕantə ħɛrə-**tə**	black eyes
c. e:d ħærd-**et**	aditə ħærdi-**tə**	brave hands
d. ʕun-ət tˤit	χi:ʃ ʕaj-**un**	one/five years

(13) Masculine:

a. ʔofr ħor	ʕafr**in** ħɛrə-**tə**	black clouds
b. foduun ħɛrd-**et**	fidn**in** ħɛrd**i-tə**	solid stones
c. łotˤ ʔafir-**ot**	łetˤa-**tə** ʔafre-**tə**	red fire

Two observations about the above forms are in order. (1) Gender has nothing to do with the pattern of the plural. The plural does not change its gender; it takes the same gender assigned to the singular form. However, the singular in (12b) is suffix-less.

Based on surveying the gender of plural nouns when they combine with various adjectives in Jibbāli, I observe that Jibbāli adjectives agree with the nouns they modify in number and gender. Hofstede (1998: 25) states "there is agreement between the noun and the adjective (which always follows the noun) in gender and number." This observation accords with previous work done in Jibbāli and indeed in other MSA languages. For example, in Mehri, gender stays intact when singulars become plurals (e.g. [ʁiggi:n] 'boy$_{masculine}$' whose plural is [ambarawtan] which is also masculine).

Notwithstanding, I also observe that there are a number of neutral adjective forms whose shape stays unaltered whether the noun they describe is masculine or feminine (e.g. [re**)**ti] 'tall', [lɛniti] 'white', [ħeriti] 'black', [ʔarħat] 'beautiful', [ðahnut] 'clever' and many others that relate to cleanliness, fatness and strength. These adjectives, thus, have a common gender.

In conclusion, based on the data collected and interviews with native Jibbāli, there are two groups of adjectives in the language. The first group takes the same shape for both masculine plural and feminine plural nouns. However, there is no gender mismatch between a singular and its adjective or a plural with its adjective. The other group of adjectives attaches the noun plural suffixes to mark gender. Adjectives are not observed to pluralize by other plural patterns like the *Vb* infix, attachment of a *VC* template or ablaut *modulo to* the nouns they describe.

6. Common Observations on Plurality in Jibbāli

Jibbāli has two types of plural: external (also known as sound) and internal plurals. Internal plurals involve internal stem changes such as mapping onto a template, reduplication, ablaut and infixation. It has also been noted that a singular form may have many plural shapes in Jibbāli (Johnstone 1981; Simeone-Senelle 1997).

Ratcliffe (1998a) argues that plural formation is a very revealing morphological process. Therefore, it must be taken into account when classifying Semitic languages. The diverse patterns of plural should be scrutinized as they can be indicative of where a particular language belongs in the classification of Semitic. Ratcliffe (pp. 95-97) makes the following observations about plural in Jibbāli in his discussion of the broken plural and Semitic sub-classification:

1. Jibbāli has a plural for the masculine base nouns which is much closer to the Ethiopian Semitic shape than to Arabic.

2. The most prevalent shapes of plural in Jibbāli are VCCVC (62 of 207 forms in Johnstone's Jibbāli Lexicon) or CVCVC (also 62 examples), with the inserted vowels /ɔ/, /u/ and /ɛ/, very rarely do /e/, /i/ surface in these shapes. However, /a/ shows in guttural environment only. Therefore, the most common shapes are ɔCCɔC, ɛCCɔC, ɛCCɛC, ɛCCuC, CVCɔC, CVCɛC and CVCuC.

3. There are 25 plurals with word initial consonant clusters. They neither have an initial vowel nor an epenthetic vowel to break up the consonant clusters;

4. The third most common shape of plural (28 out of 207) is ɛCCeC(V)t. This shape reflects a common plural pattern in Ge'ez.

5. The sound feminine plural is also commonly found but usually derives from weak root or bi-radical singulars. This shape exhibits a vocalic stem change.

6. The feminine singular suffix has the shapes -et, -ɛt, -at and -ɔt. There is a correlation between the quality of the vocalic suffix and the plural form. Singulars taking the shape CvCCet are observed to strongly favor the plural shape CeCɔCte, with inserted /ɔ/ and feminine plural suffix -te. On the other hand, an internal plural shape CVCVC (in which the vowels are usually /ɛ/, /e/, /a/ and occasionally /ɔ/, /o/ or /u/ and often a copy of the vowel in -Vt) is preferred for the singulars CVCCɛt (52 of 59 forms), CVCCɔt (26 of 27) and CVCCat (11 of 11).

7. Quadriliteral singulars take three distinct shapes. The first shape they take is the common southern Semitic shape CaCaaCiC but the second syllable is not long and has the vowels /o/, /ɔ/, /u/ or rarely /ɛ/ in Jibbāli. Secondly, they take a shape derivable by the alternation of the vowel in the final syllable CVCCe/aC → CVCCoC and CvCCɛ/iC → CvCCuC and finally the shape CVCVbCVC with an infix -Vb- (-ɛb- or -ab-) between the second and third radical.

8. The reflex of the quadriliteral shape CoCoCuC is common for the feminine but rare for the masculine singulars.

9. The prominent plural shapes in other southern Semitic languages CaGaaCiC and CaCaaGiC whereby G → glide do not occur in Jibbāli. This is due to the fact that intervocalic glides are not attested in the language.

10. The reflex of the participial form CaaCiC takes the pattern CɔCəC. The vowel of the first syllable may be /o/ or /u/ and the vowel of the second syllable may be /u/.

11. The most common plural for adjectives is CVCɛCt or CvCaCt.

The current study documents the diverse patterns of noun plurals in Jibbāli based on the morpho-phonological processes. It, therefore, differs from Ratcliffe's diachronic study of plural in Semitic (1998), which describes plurals based on their CV shapes in order to find a proto-type plural in Semitic. However, some of his observations regarding noun plurals in Jibbāli are confirmed by this study. For example, I also observe that the most common plural marker for adjectives is the default plural suffix –t(V) (observation #11) and agree with Ratcliffe about the fact that this suffix is a feminine plural marker and is commonly found (observations #5 and #4); whether it attaches to weak or sound roots is not explored in this study. Moreover, this study conforms with Ratcliffe's observation that quadri-literal nouns most often are pluralized by either ablaut or *Vb* infixation (observation #7). These two processes are very prevalent in Jebbāli, and I observe that ablaut targets other shapes of singular forms too (bi-literal and tri-literal).

Contrary to Ratcliffe, I did not see the shape CaC(/o/, /ɔ/, /u/)CiC, which he claims to be also common for the quadri-literal forms. In observation #9 above, Ratcliffe states that "Jibbāli has no CVCVVC or CVVCVC patterns", and this study also confirms the non-existence of such plural shapes in the language. Ratcliffe also observes that the most prevalent shapes of plural in Jibbāli are VCCVC or CVCVC, with the inserted vowels /ɔ/, /u/ and /ɛ/, very rarely do /e/, /i/ surface in these shapes (observation #2). I list these shapes under 'templatic plurals' and conclude that they are not as common as other plural patterns. In my data, the initial V in the template VCCVC is epenthetic, and does not appear in many plural forms. While this study also shows that the feminine suffix bears the shapes *-et*, *-ɛt*, -at and *-ɔt*, it does not investigate if there is any correlation between the quality of the vocalic suffix and the plural.

Simeone-Senelle (1997:388) identifies some crucial features of plural in Jibbāli and other MSA languages. The most common pattern of plural for the trilitral verbs is CCV:C (a plural for many feminine singulars) and for the quadri-literal are CCV:CC and CCVCC. A common pattern of plural in Jibbāli is CCVC**Vb**CC, and there is also a vocalic opposition observed in the last syllable of both the singular and plural forms. Simeone-Senelle (1997:388) also identifies that some plural patterns correspond to Arabic *plural of the plural* (emphasis hers). External plural, on the other hand, takes the suffix *-Vtə (n)* (Simeone-Senelle 1997:388 and Lonnet 1985:54). Some plurals with the suffix *-i* come from the dual (Johnstone 1975:113).

Similar to Simeone-Senelle's conclusion, this study also concludes that *Vb* infixation and ablaut are, by and large, the most common plural patterns in Jibbāli. However, this study does not list CCV:C as a common one for the tri-literal verbs, and agrees about Ratcliffe's observations that Jibbāli plurals do not involve length in their overall shapes. Simeone-Senelle claims that *-Vtə(n)* is a marker for the external plural. However, this study does not have the (n) included in the default plural marker *–t(V)*, and shows that the /n/ belongs to a different plural suffix *–Vn,* and is never optional (as shown by the brackets around it in Simeone-Senelle's study).

7. Conclusion

In this paper, I have addressed the diversity and intricacy involved in the formation of noun plural in Jibbāli, an underrepresented language in Semitic. In documenting the enormously diverse shapes of plurals, I explored a number of non-concatenative morphological processes under which these plurals can be classified. Previous work, which shed light on plural in the language, concerns only listing noun plurals based on their CV shapes, and does not identify the crucial morphological processes. I further showed that many noun plurals in Jibbāli are productive may phonetically and historically derive from Arabic, MSA and Semitic languages.

References

Al Aghbari, Khalsa. (2014a). Vb infixed plurals in Jebbāli. *Morphology 24*(2), 105-119 (DOI:10.1007/s11525-014-9236-x)
   http://link.springer.com/article/10.1007/s11525-014-9236-x
Al Aghbari, Khalsa. (2014b). Optimality theoretic analysis of ablaut plurals in Jebbāli.
   Linguistic Analysis 39(3 &4), 341-370.
Alfadly, Hassan and Khalid Bin Mukhasin. 2014. Perfect and imperfect passive in Jibbali.
   Journal of Hadhramout University, Jan.

Alfadly, Hassan. 2008. Future and nominal plural forms of Eastern Mehri in Oman. *Journal of Hadramout University 7*(15), 225-242

Al Hafeedh, Ali Mohsin. 1989. *Min lahja:t Mahrah wa a:dabiha*, Mata:bi' al-Nahdha.

Al Mashani, Mohammed. 1999. *The Lexical relationship between Classical Arabic and Shehri: A comparative analytical study*, Ph. D. dissertation, University of Manchester.

Al Mashani, Mohammed . 2003. *Lisan Dhofar al- hemyari al- m'asir: Dirasah mu'jamiyya muqaranah*, Center for Omani Studies, Sultan Qaboos University.

Al Shehri, Salem. 2007. *Al-lugha al-shehriya wa 'laqatuha bi al-lugha al-'arabiya: Dirasah muqaranah*, Master's thesis, University of Yarmouk.

Al Tabuki, Salem. 1982. 'Tribal Structures in South Oman', *Arabian Studies* **6**, 51-56.

Belova, Anna. 2009. 'South Semitic Languages', in K. Versteegh et al (eds.), *Encyclopedia of Arabic Language and Linguistics, volume IV*, Leiden: Brill, pp. 301-315.

Goldenberg, Gideon. 1977. 'The Semitic Languages of Ethiopia and their Classification', *Bulletin of the School of Oriental and African Studies* **40**, 461-507.

Hetzron, Robert. 1972. 'Ethiopian Semitic: Studies in Classification', *Journal of Semitic Studies,* Monograph 2, Manchester, Manchester University Press, pp. xii -145.

Hetzron, Robert. 1997. *The Semitic Languages*. London: Routledge.

Hofstede, Anje. 1998. *Syntax of Jibbali*, Ph. D. dissertation, University of Manchester.

Johnstone, Thomas.1975. 'Contrasting Articulations in the Modern South Arabian Languages', in James and T. Bynon (eds.), *Hamito-Semitica*, The Hague and Paris, Mouton, pp. 155-159.

Johnstone, Thomas. 1981. *Jibbāli lexicon*. London: Oxford University Press.

Lonnet, Antoine. 1985. 'The Modern South Arabian Languages in the P.D.R. of Yemen', *Proceedings of the Seminar for Arabian Studies* **15**, 49-55.

Lonnet, Antoine. 2009. 'South Arabian, Modern', in K. Versteegh et al (eds.), *Encyclopedia of Arabic Language and Linguistics, volume IV*, Leiden, Brill, pp. 297-300.

Morris, Miranda. 2007. 'The Pre-literate, Non Arabic Languages of Oman and Yemen: Their Current Situation and Uncertain Future', *The British- Yemeni Society Journal,* 39-53.

Nakano, Aki'o. 1986. *Comparative Vocabulary of Southern Arabic: Mahri, Gibbali, and Soqotri*, Tokyo, Institute for the Study of Languages and Cultures of Asia and Africa.

Newman, Paul. 1990. *Nominal and verbal plurality in Chadic*. Dordrecht: Foris.

Ratcliffe, Robert. 1992. *The Broken Plural Problem in Arabic, Semitic and Afro-asiatic: A Solution Based on the Diachronic Application of Prosodic Analysis*, Ph.D. dissertation, Yale University.

Ratcliffe, Robert. 1996. 'Drift and Noun Plural Reduplication in Afro-Asiatic', *Bulletin of the School of Oriental and African Studies* **59**, 296-311.

Ratcliffe, Robert.1998a. 'Defining Morphological Isoglosses: The Broken Plural and Semitic Sub-classification', *Journal of Near Eastern Studies* **57**, 81-123.

Ratcliffe, Robert.1998b. *The Broken Plural problem in Arabic and Comparative Semitic: Allomorphy and Analogy Non-concatenative Morphology*. Amsterdam/ Philadelphia: John Benjamins.

Rodgers, Jonathan. 1991. 'The Sub-grouping of the South Semitic Languages', in Alan S. Kaye (ed.), *Semitic Studies in Honor of Wolf Leslau on the occasion of his eighty-fifth birthday*, Wiesbaden, Otto Harrosowitz, pp. 1323-1335.

Rubin, Aaron. 2014. *The Jibbali Language of Oman*.

Rubin, Aaron. 2008. The subgrouping of the Semitic languages. *Language and Linguistic Compass 2*(1), 79-102

Simeone-Senelle, Marie-Claude.1997. 'The Modern South Arabian Languages', in R. Hetzron (ed.), *The Semitic Languages*, London, Routledge, pp. 378-423.

Zaborski, Andrzej.1986. *The Morphology of the Nominal Plural in the Cushitic Languages*. Vienna: Afro-Pub.