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Lameen Souag

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# ASTRONOMY AMONG THE AYT XEBBAC OF TABELBALA

Lameen Souag, LACITO (CNRS – Sorbonne Nouvelle – INALCO)

## I. INTRODUCTION

Berber ethnoastronomy remains inadequately studied, with the honourable exception of Tuareg traditions (Bernus & Ag-Sidiyene 1989; Aghali-Zakaria 2014). For northern Berber, even the best modern dictionaries rarely include more than a couple of astronomical terms beyond the most generic – although the earliest surviving Berber lexicon, Ibn Tunart (12<sup>th</sup> century), includes eleven such terms (van den Boogert 1997: 119). In this context, any new data is of value, if only to provoke others into documenting the field more extensively. This article therefore presents and analyses what little could be gleaned of the hitherto undocumented astronomical vocabulary of Berber-speaking nomads in southwestern Algeria, in the course of fieldwork primarily focused on another language. I thank the speakers who were kind enough to share this vocabulary with me, and the Arts and Humanities Research Council for funding the fieldwork.

## II. THE SPEAKERS

The Algerian oasis of Tabelbala traditionally has as its primary language Korandje, a highly divergent Northern Songhay language (Souag 2010a). Many Belbalis belong genealogically to the Ayt Isful (Korandje *It Sful*), a branch of the Ayt  $\epsilon$ a $\tau$ ta (Ait Atta) confederation of southeastern Morocco (Hart 1981); however, apart from a few women brought in from further north by marriage, they traditionally speak Korandje like their neighbours, and like them are now shifting to Arabic. However, as discussed in passing by Champault (1969), Tabelbala also includes a few families from another branch of the Ayt  $\epsilon$ a $\tau$ ta, the Ayt Xebbac (Ait Khebbach); cf. Lefébure (1986), Gelard (2004). Their older members still speak Berber.

The Ayt Xebbac of Tabelbala (*Tabelbalt*) consist of former nomads who settled down there in the twentieth century and their children, adopting the family name Brahmi. Their genealogical ties with the Ayt Isful led most to settle in the western villages of Cheraia and Bina Eddati, while some opted for the administrative centre, Hai El Wasat. My principal consultant H. Brahmi, born in the late 1930s, spent the first half of his life as a herdsman in the Daoura valley, a relatively well-watered but uninhabited area west of Tabelbala split by the Algerian-Moroccan border. He took refuge in Morocco during the revolution after the French armed forces bombed nearby Bou-Tbiga, then came back to Algeria afterwards, and continued to live as a nomad until 1976, when the Western Saharan conflict escalated.

The Ayt Xebbac call both their own language and Korandje *tacelhiyt* “Shilha”, as distinct from *taeraft* “Arabic”. If the two must be distinguished, their Berber may be termed *tacelhiyt nney* “our Shilha” or *tacelhiyt n imaziyen* “Amazigh Shilha”, and Korandje *tacelhiyt n ibelbaliten* “Shilha of the Belbalis”. Linguistically, however, their language belongs to southern Tamazight.

During fieldwork in Tabelbala over 2009-2010, primarily focused on Korandje, I elicited vocabulary and short phrases from several of the remaining Ayt Xebbac speakers. Most of the resulting data turned out to be identical to the Ayt ⵉⴰⵜⵜⴰ lexicon of Amaniss (1980), except that this group, like the one studied in Mauri (2015), use /d/ rather than /t/. Material absent from Amaniss' lexicon mostly falls into two categories: transparent Arabic loanwords, which Amaniss excludes, and specialist vocabulary relating to the environment, such as *yellu* “dab-lizard (*Uromastyx*)”, *tabeṛḍemmuct* “lizard”, *aq<sup>w</sup>eṛcan* “fennec”.

### III. ETHNOASTRONOMICAL TERMINOLOGY

The principal consultant was able to recall a good deal of astronomical terminology, having spent his youth under the open sky; he vividly recalled finding a freshly fallen meteorite the morning after seeing it fall. Unfortunately, his poor health made direct inquiry under the night sky unfeasible. Specific stars and constellations were therefore identified through descriptions accompanied by Arabic translations, using a regional terminology nearly identical to that described by Monteil (1949) for Hassaniyya, and described for Tabelbala in Souag (2010b). All of the latter except *eddxinat* were verified for Arabic by direct observation. The data is summarized in Table 1.

	Ayt Xebbac	Local Arabic
Venus (Evening Star)	<i>titrit n iyejden</i>	
Venus (Morning Star)	<i>nejmet eṣṣbeḥ</i> < Ar.	<i>nejmet eṣṣbeḥ</i>
Polaris	<i>belhadi</i> < Ar.	<i>belhadi</i>
Orion	<i>amanar</i>	<i>elmeccbuḥ</i>
Sirius	<i>tiḡdett umanar</i>	<i>elmarzem</i>
Pleiades	<i>tintsdiṣ</i>	<i>ettreyya</i>
Aldebaran	<i>amzil</i>	<i>elēyyub</i>
Algieba (?)	<i>lemraxi</i> < Ar.	<i>eddxinat</i>
Canopus	<i>sshil</i> < Ar.	<i>esshil</i>
Milky Way	<i>asif n yigenna</i>	<i>wad essma</i>
comet	<i>butbbib</i>	
meteorite	<i>tagg<sup>w</sup>unt n yigenna</i>	
star	<i>itri pl. itran</i>	<i>nejma</i>
moon	<i>ayur</i>	
sun	<i>tafuyt</i>	
sky	<i>igenna</i>	<i>essma</i>

*Titrit n iyejden* for “Venus (Evening Star)”, literally “star-feminine of kid-goats”, corresponds well to Tuareg *tatrit* and to its association with goat-milking in Tuareg culture, as described by Bernus and Ag-Sidiyene (1989: 144). The use of a feminine of “star” for Venus is also probably found in Shilha *titri n eṣṣbaḥ* (Destaing 1920: 118), not glossed but presumably “Venus (Morning Star)”. As such, *titrit* for “Venus” may be considered a pan-Berber astronomical term. Interpreting this as a diminutive seems inappropriate, as Venus is by far the brightest celestial object apart from the sun and moon; it is more likely to reflect a mythological identification of Venus as female, just as in Latin, Greek, or Arabic.

*Amanar* for “Orion”, etymologically thought to have meant “guide” (cf. Tamahaq *ənər* “guide”, Foucauld (1951)), likewise seems to be pan-Berber. It is attested in Morocco as early as the mid-12th century, in Ibn Tunart's lexicon (van den Boogert 1997: 119); it remains in use among the Tuareg to this day (Bernus & Ag-Sidiyene 1989: 145). *Tiqdett Umanar* “the little dog of Orion” for Sirius, like Tuareg *Idi / Idi n Amanar* (Aghali-Zakaria 2014) but unlike Ibn Tunart's *Alekla*, identifies Sirius with a dog following at Orion's heels, reproducing the same classical metaphor as found in the English term “Dog Star” and the name of its constellation *Canis Major*.

*Tintsdiş* for “the Pleiades” also reflects a pan-Berber term, but less directly. Its ultimate source is more clearly revealed by Ibn Tunart's *Id Yesteḍ*, which in light of Tuareg *Acet-əhaḍ* “daughters of the night” may be analysed as *\*Ist-yid*. However, as this compound became unanalysable, its awkward phonotactics and lack of a gender prefix led to folk-etymological reformulations. Among the Ayt Xebbac, a form along the lines of *\*Tistid* was thus replaced by *Tintsdiş* “the one (f.) of” + *t* + “six”, corresponding to the six easily visible stars in the Pleiades. (This must have happened some time ago; *sdiş* is no longer familiar to the Ayt Xebbac, who use Arabic numerals from four up.) A different reanalysis is reflected further east in Timimoun (Taznatit) *Timeḍḍawin* “the weavers” (field data), in which the *sṭ* of *Yesteḍ* has been reinterpreted as reflecting *√zd* “weave”, while retaining the feminine plural.

*Amzil* for “Aldebaran”, literally “blacksmith”, is not attested in Ibn Tunart, and does not match Tuareg *Kuk-āyhāḍ*. The name's motivation is not immediately obvious, but the star's reddish tint may have suggested a connection with red-hot iron in a blacksmith's flame.

*Asif n yigenna* for “Milky Way”, literally “river of the sky”, may be a regionally unusual choice of metaphor. Across North Africa it more often seems to be identified with the “road of straw”, as in Yefren Berber (Libya) *abrid n ulem* (Maziḡ Buzexxar, p.c.), while Tuareg *Məhəllaw* has no obvious derivation. Arabic *Wad es-sma* was recorded only from this speaker; other Belbalis used *el-Xūṭṭ* “the line”.

*Bu-tbbib* for “comet” is structurally *bu-* “possessor of” plus *tbbib*. For the latter element, cp. Chaoui *tebbib* “hoopoe” (Ounissi 2003); the tail of a comet may be compared to the crest of a hoopoe, just as Hassaniyya *umm-əssbīb* compares it to the mane of a horse. Other metaphors are attested elsewhere in Berber; for Shilha, Destaing records *itri yezzifen* “long star”, while “star with a tail” (cp. Arabic *muḍannab*) is reflected in Chafik's (1990: I.395) *bu-tmyilt* and Ouargli *itri bab n tẓendiṭt* “star possessor of tail” (Delheure 1987: 338).

*Taggʷunt n yigenna* “stone of the sky” for “meteorite” is transparent.

## IV. CONCLUSION

Until recently, the Ayt Xebbac retained a relatively extensive astronomical terminology. Among those terms, Venus (“star-feminine”), Orion (“guide?”), Sirius (“dog of Orion”) and the Pleiades (“daughters of the sky”) have names sufficiently widely attested – from Morocco to Niger – to be provisionally considered pan-Berber. To get a better idea of Berber astronomy, more field data is urgently needed, especially from the remaining nomadic groups in the north.

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