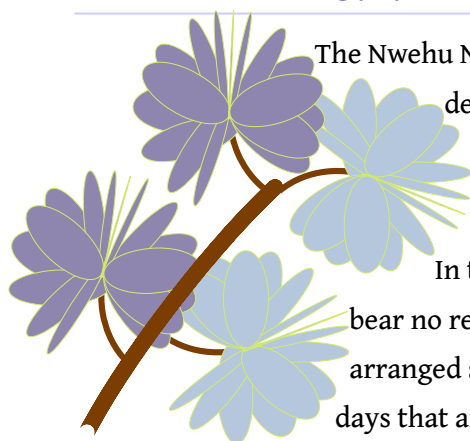# Chapter 13.   Newhu Nuswei Calendar

Latest update: 2024-08-22

13.1.   About Newhu Nuswei Calendars

The Nwehu Nuswei calendar is inspired in part by J.R.R.Tolkien's Shire Calendar, described in Appendix D of *The Lord of the Rings.* However, like the language, the Nwehu Nuswei (NN) calendar is configured using number-base sixteen, the number-base around which most computer architectures are designed.

In the Gregorian (our "standard") calendar, weeks are all of seven days, and bear no relation to months or years. The Shire Calendar and the NN Calendar are arranged so that each year begins on the same week-day. This is done by inserting days that are not part of any week, and serve as rest-days or festivals.

The attempt is to base the calendar's periods on powers of two (2, 4, 8, 16, 32, etc.), which leads to dismissing the concept of a seven-day week – a concept which the Shire Calendar retained. At the same time, any terrestrial calendar must conform to the terrestrial revolution period, which is approximately 365.242 days long. Of course, the fractional number of rotations in the revolution leads to problems with any calendar system, generally addressed by a system of "leap days", the extra days added (or not added) to synchronize the calendar with the seasons. This calendar, like many others, provides for a "leap day" that can be inserted every four years, and not inserted when doing so would throw the calendar out of synchronization.

Periods in the NN calendar are created by aggregating days in groups of 4, 8, 16, and 32. (Note that in NN, as in many computer programming languages, counting begins with 0 rather than 1.) There are several ways to intersperse work days and rest days; I have drafted three as "standard options". The number of rest days in these calendars is roughly equivalent to what the Gregorian calendar offers. If NN were actually to be adopted as a world language, nations or regions would have the choice of any of the three calendar options – or others like them – so that any or all of the NN calendars could conceivably be in use in different parts of the world. Since all the options share the same season-beginning dates roughly coinciding with the solstices and equinoxes, these would serve as common "anchors" uniting all NN calendars.

13.2.   Nwehu Nuswei Calendar Words

All NN words expressing related concepts begin with the same or similar syllable. In the case of time and calendar concepts, the initial syllable is ⅄ꓩ- *Tw-* [tu]. Some are listed below with their English equivalents. These English equivalents have been constructed for convenience in refering to the concepts.

13.2.1.   General Calendar Words

Time concepts are expressed in GENUS ⅄ꓩ-- *Tw*--. The major subdivisions are listed in Ɖρ 13.1.

NN			Semantics
	Latin	**IPA**	
⅄ꓩꓲ–	*Twh-*	tuh	Time, relativity of time; as a dimension of space-time
⅄ꓩ�–	*Twx-*	tuʃ	Year of Earth; year of other planets
⅄ꓩ⅃–	*Tws-*	tus	Time measurement systems
⅄ꓩ⊥–	*Twf-*	tuf	Calendars, clocks
⅄ꓩг–	*Twr-*	tuʁ	Day of Earth; day of other planets; time when day/night is not relevant
⅄ꓩꓴ–	*Twy-*	tuʒ	Gregorian and other calendar systems
⅄ꓩꓩ–	*Twn-*	tun	Standard time units: month, week, hour, minute, second
⅄ꓩꓔ–	*Twm-*	tum	Types of days: of week, of work, of rest, festival, holy, memorial, anniversary, national or peculiar to groups of people

Ɖρ 13.1 General time concept Geni

13.2.2.   Nwehu Nuswei Calendar words

NN	Latin	IPA	Semantics	English, Notes
⅄ꓩꓨꚈ	***twku***	**tuˈkə**	**Hexadecimal time and date system**	
⅄ꓩꓨꓣ	*twka*	tuˈka	4-day "week"	Quad-day – used in Calendar Option 1
⅄ꓩꓨꓴ	*twkw*	tuˈku	8-day "week"	Oct-day – half of a Hex-day in Calendar Options 2 and 3
⅄ꓩꓨꓮ	*twkwe*	tuˈkwe	16-day week (or month)	Hex-day – the primary grouping of days in Options 2 and 3
⅄ꓩ⅃Ꚉ	***twcu***	**tuˈʧə**	**Seasons**	
⅄ꓩ⅃ꛌ	*twci*	tuˈʧi	Winter (astronomical season)	These seasons are the same in northern and southern hemispheres.

NN	Latin	IPA	Semantics	English, Notes
ꓭꓵꓶꓷ	twce	tu'ʧe	Spring (astronomical season)	The cold, warm, and in-between seasons are referred to using meteorological words (not developed at this time; probably in the *D---* FAMILY relating to natural phenomena.)
ꓭꓵꓶꙡ	twcei	tu'ʧej	Summer (astronomical season)	
ꓭꓵꓶꓒ	twca	tu'ʧa	Autumn (astronomical season)	
			Days	
ꓭꓵꓶꙇ	twtu	tu'tə	a work-day	Counted: 0=*twtu*, 1=*twti*, 2=*twte*, 3=*twtei*, 4=*twta*, 5=*twtai*, 6=*twto*, 7=*twtoi*, 8=*twtw*, 9=*twtwui*, 10-*twtwe*, 11=*twtwei*, 12-*twtwa*, 13=*twtwai*, 14=*twtwo*, 15=*twtwoi*
ꓭꓵꓛꙇ	twpu	tu'pə	a rest-day or festival-day	Counted like twtu: 0=*twpu*, 1=*twpi*, etc.

Ꭰₚ 13.2: Calendar vocabulary

In our Gregorian calendar, we can refer to any day of the year using two words, the month and day-number, as in March 15 or September 22. The day of the week is often added for clarity, as in Friday, January 1. Likewise, in the NN calendar, two words can be used to refer to any day of the year: the ꓭꓵꓥꙡ *twkwe* (sixteen-day period) and the ꓭꓵꙆꙇ *twmu* (day). For example, ꓭꓵꓶꓒ ꓭꓵꓛꓳ *Twca Twpo* [tu'ʧa tu'po] was September 22 in 2016. Since ꓭꓵꓭꓧ *Twtwa*, ꓭꓵꓛꓳ *Twpo*, or any day-name also serve as "weekday" names, there is no need to add a third word for clarity.

However, these two-word day names refer to different days of the year in each of the calendar options. Perhaps this is a good reason for everybody to use to use the same option. For example:

- ꓭꓵꓩꓒ ꓭꓵꓭꓧ *Twga Twtwa* [tu'ga tu'twa] is:
  - the 111th day of the year in Calendar 1 (Gregorian date April 10 in 2016), but
  - the 87th day of the year in Calendar 2 (Gregorian March 18, 2016).
- ꓭꓵꓩꓒ ꓭꓵꓭꓧ *Twga Twtwa* [tu'ga tu'twa] in any NN calendar also changes its Gregorian date depending on the year; using Calendar 2 it is:
  - March 18, 2016 (a leap year), but
  - March 17, 2017 (a non-leap year) because the leap day is added to February in the Gregorian system, but in mid-summer in the NN system.

Another source of differences between all NN calendars and Gregorian calendars: the Winter Solstice is always the first day of the NN year, but its date varies between December 19 and 21 in the Gregorian system.

13.3.   Calendar Options

Three calendar options have been drafted. All have seasons of the same length (91 days) beginning on the same day: the northern hemisphere's shortest day of the year (Winter Solstice). This results in people in the southern hemisphere beginning each year in their summer (as they do with the Gregorian calendar), and celebrating the longest ꓬꓴꓵꓘ *twmwe* festival period in mid-winter.

Each option has differing numbers of festival days at the beginning (in Option 2) or interspersed (in Options 1 and 3). I personally tend to favor Option 2, and created full-year calendars for 2016 and 2017 using Option 2, with integrated Gregorian dates.

13.3.1.   Calendar Option 1

Calendar 1 is based on four ꓬꓴꓺꓘ *twkwe* (short-months of 16 work-days) in each of the four seasons.
Each ꓬꓴꓺꓘ *twkwe* is divided into four ꓬꓴꓺ꓄ *twka* (short weeks) composed of four ꓒꓵꓕꓖ *tumo* (work-days) and one ꓬꓴꓕꓶ *twmi* rest-day. Each season begins with a ꓬꓴꓵꓘ *twmwe* (seasonal festival period) of five days.
The second, third, and fourth ꓬꓴꓺꓘ *twkwe* of each season have two extra ꓬꓴꓕꓶ *twmi* (rest-days) before the first ꓬꓴꓺ꓄ *twka*.
Most years, a single ꓬꓴꓵꓦ *twmwi* (extra festival day) is added as a Midyear Day; in leap years, the ꓬꓴꓵ�ркꓒ *twmei* (leap day) is added after the ꓬꓴꓵꓦ *twmwi*. The complete Calendar Option 1 is shown in Ɖρ 13.3 – 13.6:[15]

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15   Colored words correspond to colors of days on the following calendars.

Ɖρ 13.3:

ꓘꛁꓔꝟ *TWCI* 'WINTER' *Calendar Option 1*

0	0	1	2	3	4
ꓘꛁꓔı	0	1	2	3	5
Twgu	4	5	6	7	6
	8	9	10	11	7
	12	13	14	15	8

1	0	1			
ꓘꛁꓔꚶ	0	1	2	3	2
Twgi	4	5	6	7	3
	8	9	10	11	4
	12	13	14	15	5

2	0	1			
ꓑꛁꓔ	0	1	2	3	2
Twge	4	5	6	7	3
	8	9	10	11	4
	12	13	14	15	5

3	0	1			
ꓘꛁꓔꚶ	0	1	2	3	2
Twgei	4	5	6	7	3
	8	9	10	11	4
	12	13	14	15	5

Ɖρ 13.4:

ꓤꓥ�ꓼ *TWCE 'Spring' Calendar Option 1*

4	0	1	2	3	4
ꓤꓥꓔꓒ	0	1	2	3	5
Twga	4	5	6	7	6
	8	9	10	11	7
	12	13	14	15	8

5	0	1			
ꓤꓥꓔꓒ	0	1	2	3	2
Twgai	4	5	6	7	3
	8	9	10	11	4
	12	13	14	15	5

6	0	1			
ꓤꓥꓔ	0	1	2	3	2
Twge	4	5	6	7	3
	8	9	10	11	4
	12	13	14	15	5

7	0	1			
ꓤꓥꓔ	0	1	2	3	2
Twgei	4	5	6	7	3
	8	9	10	11	4
	12	13	14	15	5

ꓤꓥꓔꓶ *TWMI Midyear*

0	(1)*

*Extra day on leapyears

Ɖρ 13.5:

ᛉᚼᚈᚼ *TWCEI* 'SUMMER' *Calendar Option 1*

8	0	1	2	3	4
ᛉᚼᚈᚼ	0	1	2	3	5
Twgw	4	5	6	7	6
	8	9	10	11	7
	12	13	14	15	8

9	0	1			
ᛉᚼᚈᚼ	0	1	2	3	2
Twgwi	4	5	6	7	3
	8	9	10	11	4
	12	13	14	15	5

10	0	1			
ᛉᚼᚈᚼ	0	1	2	3	2
Twgwe	4	5	6	7	3
	8	9	10	11	4
	12	13	14	15	5

11	0	1			
ᛉᚼᚈᚼ	0	1	2	3	2
Twgwei	4	5	6	7	3
	8	9	10	11	4
	12	13	14	15	5

Ðρ 13.6:

ᕽᕟᒓ TWCA 'Autumn' *Calendar Option 1*

12	0	1	2	3	4
ᕽᕟᔙ	0	1	2	3	5
Twgwa	4	5	6	7	6
	8	9	10	11	7
	12	13	14	15	8

13	0	1			
ᕽᕟᔙ	0	1	2	3	2
Twgwai	4	5	6	7	3
	8	9	10	11	4
	12	13	14	15	5

14	0	1			
ᕽᕟᔙ	0	1	2	3	2
Twgwo	4	5	6	7	3
	8	9	10	11	4
	12	13	14	15	5

15	0	1			
ᕽᕟᔙ	0	1	2	3	2
Twgwoi	4	5	6	7	3
	8	9	10	11	4
	12	13	14	15	5

13.3.2.   Calendar Option 2

Calendar 2 is based on five ꓱꓵꓥ *twkwe* 'short-months of 16 total days' in each of the four seasons. Each ꓱꓵꓥ *twkwe* is divided into four ꓱꓵꓥ *twkw* 'eight-day weeks' composed of six ꓱꓩꓕꓑ *tumo* 'work-days' and two ꓱꓵꓕꓡ *twmi* 'rest-days.

Each season begins with a ꓱꓵꓕꓥ *twmwe* 'seasonal festival period' of eleven ꓱꓵꓕꓕ *twme* 'festival days', except that ꓮꓵꓕꓥ ꓮꓕꓕꓕ *Twmwe Tucei* the 'summer festival' has one more day in most years, with ꓮꓵꓕꓕ *Twmei* the 'leap-day' added during leap-years.

This produces six-day ꓱꓵꓕꓑ *twmwo* 'work-weeks' with a two-day ꓱꓵꓥ *twkwo* 'weekend'; the reward for the relatively long ꓱꓵꓕꓑ *twkwo* is the long ꓱꓵꓕꓥ *twmwe* 'seasonal festivals', which, in addition to their 11 or 12 ꓱꓵꓕꓕ *tume* 'festival days off', add the ꓱꓵꓥ ꓱꓵꓕꓕ *twkwo twmwei* 'weekend days off' at either end for a total of 13 or 14 days off four times a year.

13.3.3.   Calendar Option 3

Calendar 3, like Calendar 2, is based on five ꓱꓵꓥ *twkwe* 'short-months of 16 total days' in each of the four seasons.

Also like Calendar 2, each ꓱꓵꓥ *twkwe* is divided into four ꓱꓵꓥ *twkw* 'eight-day weeks' composed of six ꓱꓵꓕꓑ *twmo* 'work-days' and two ꓱꓵꓕꓡ *twmi* rest-days.

But Calendar 3 "spreads the joy" of the festivals by celebrating only three days at the beginning of each season, distributing the other ꓱꓵꓕꓕ *twme* 'festival days' between each ꓱꓵꓥ *twkwe.* The ꓮꓵꓕꓕ Twmei 'leap-day' is handled exactly as in Calendar 2.

And like Calendar 2, the ꓱꓵꓕꓑ *twmwo* 'work-week' is six days long, but every second ꓱꓵꓥ *twkwo* 'weekend' is four, rather than only two days long; between seasons, the ꓱꓵꓕꓥ *twmwe* 'seasonal festival' is five days long (six days most summers, seven during leap-years).

This concludes discussion of NN calendars.