

PUAKA & MATARIKI

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To many, New Year is thought to be a purely European institution and, of course, is observed in summer, which is somewhat ironic as summer is in the middle of the southern hemisphere year.

In fact, most of the world's peoples have a concept of New Year and, usually, it is in winter, since it is from the shortest day onwards that the rebirth of the year is seen to occur. In recent years there has been increasing focus in New Zealand on the 'Māori New Year', usually referred to as 'Matariki'. However, in Te Wāipounamu, and a number of other places, it is not the constellation of Matariki but the star Puaka¹ (Rigel in Orion) that heralds the New Year.

Unsurprisingly, Māori were no more homogeneous in their traditional approach to the New Year as they were in other matters and, indeed, throughout Polynesia there are two main traditions, with various local variations. The peoples of East Polynesia, in the main, have traditions based on the heliacal (pre-dawn) rising of Matariki; West Polynesia, together with a few North Island peoples, most of Te Wāipounamu and Rekohu, have New Year traditions based on Puaka. Elsdon Best writes 'In the far North, however, also in the South Island and the Chatham Isles, the new year was marked by the cosmic rising of Rigel in Orion' (1986 [1922]: 11-12). This is Puaka and while it was the *tohu*, or sign, of the New Year, the New Year proper commenced at the next new moon.

PUAKA

According to traditional Ngāi Tahu thought, Ngā Kapa are the two lines, each of three stars, that in European lore comprise Orion's belt and sword and Puaka (Rigel) is a single, bright star, a little below and to the right of Ngā Kapa. Puaka changes colour from time to time and twinkles vigorously (Tikao, 1990). The old people considered that the stars moved, 'setting a little higher each morning' (ibid.:48).

Puaka ... rises about June 6, and is the principal star of the Canterbury Māori. ... If it comes up on the south side, it is a sign of bad weather, but if it rises on the north side it is a good *tohu* (omen). *Matariki*, a group of stars, rises two or three weeks earlier, than *Puaka* while *Ngakapa*, a group of stars in a straight line, show the near approach of *Puaka*, as they rise two or three days before. (Tikao, 1990:49).

If Puaka's rays seem directed to the south that is a sign of bad weather. Beattie elaborates, based on information from an elder at Arowhenua, by saying that a stick was placed upright in the ground and watched for several nights. If the star rose to the south it was a sign of good weather but if it rose to the north it meant bad weather (1994:363). He advises that the colour of the star was also important but does not give details (*ibid.*).

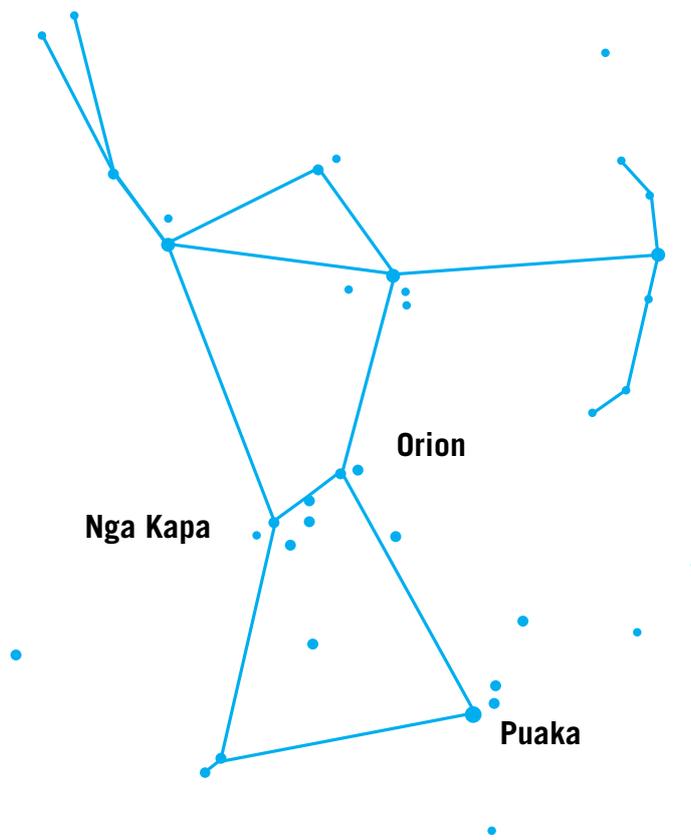


Fig 1. Orion with Nga Kapa and Puaka (<http://images.google.co.nz/imgres?imgurl>)



MATARIKI

Matariki is a group of stars that disappears below the horizon of the eastern sky for a few weeks, in late April and May each year.

Fig 2. Te Huihuinga a Matariki (<http://antwrp.gsfc.nasa.gov/apod/ap060109.html>)

Tradition says that the large centre star is the old woman, Matariki, and that the lesser stars of the constellation are her six daughters. Colenso wrote: 'I found that the Maori could see more stars in the Pleiades with the unaided eye than I could, for, while I could only see clearly six stars, they could see seven, and sometimes eight' (cited in Best, 1972:52).

Astronomers are able to expand on this aspect: Leather and Hall, say that 'A large telescope reveals about 400 stars' (2004:63, footnote 2) but Eichhorn, et al., using more sophisticated equipment, have identified 502, commenting (p. 125) 'nowhere else in the sky is there a region [with] such a star density'.

The days between the appearance of Matariki and the new moon a few days later, are the Māori equivalent of 'April Fools'. People misbehave and even marriage contracts were considered 'null and void. ... Acts that would normally be unacceptable could not be punished' (Leather and Hall, 2004:63). Best mentions a similar 'festival' in 'the far north of our North Island' (1986:15).

Matariki seems to have captured the imagination worldwide: the Bible, Koran and Talmud all mention the constellation and indeed Matariki features in traditions over a wide area, even featuring in the Lascaux Cave paintings in southern France. A few examples follow.

The Pleiades, in Greek myth, were the seven daughters of Pleione and Atlas.

Australian aborigines refer to the stars as 'The Seven Sisters'.

In North America some tribes refer to Matariki as 'The Celestial horse' but most have quite localised stories involving the constellation and various local ancestors, often set during the early years of humankind.

To the Hindu they were the seven wives of the seven Rishis, or saints.

In Japan, Matariki is known as 'Subaru'; thus the stars as the logo for Subaru Motors.

Andrews (2004) provides these stories in full, along with a number of others.

The reason for Matariki being so important internationally, even when not associated with important economic drivers such as the cultivation of vital crops, may be as one Native American elder said 'No, we don't have an important story associated with those stars, though they do come into some of our children's stories, it's just that we can feel their forces.' (Anon, Pers. Comm. September 2007). This is very similar to the idea expressed in *The Huarochiri Manuscript*: 'They [Pleiades] are the most powerful stars we can feel' (1991:37). It seems not unlikely that these 'forces' have been felt worldwide by folk who are close to nature.

SEASONS

In traditional times, the Ngāi Tahu year had only three seasons, each denoted by the star that was regarded as being prominent at that time, as follows:

The winter star was Takurua (Sirius) and in many areas it gave its name to the season, which was known as Makariri in the far south;

Summer was the season of Rehua (Antares), as pointed out in the proverb: *Ngā kai i taona ai e Rehua*. (The foods cooked by Rehua) referring to the fruits that ripen in summer;

The star of autumn was Whānui (Vega).

Takurua incorporated spring, and lasted for six lunar months (Tikao, 1990:45); Raumati, or summer, was three; and Kāhuru (Autumn) approximately four,

the year ending when Puaka re-appeared. Best (1986:12), cites a Dr Thomson, who says 'The New Zealand year was an imperfect mode of reckoning time, as there could never have been always 13 moons between the appearance of the Puanga star [Rigel] of one year and that of another.' In fact, the Lunar months allowed for up to 30 named days but the full 30 were not used in any single month; it was a self-adjusting system with built-in flexibility. So too the year, which commenced at the new moon following the appearance of Puaka. John White (Vol. 3, p 81) explains this with the whakataukī: *e rua ngā tūmā o te humāeko*. The humāeko is the tail of the huia and was said to have 12 feathers: ten bunched in the centre and two (the tūmā) offset, one at each side – a natural phenomenon that indicated some variability on the fringes.

STARS AND WEATHER

As with Puaka, Matariki is also said to foretell the weather: when nine stars of Matariki stand apart, clearly, a good year will follow; when only six or seven stars seem to be showing and the stars are somewhat fuzzy, the following year will be poor. This portent of weather to come may well be the reason that Matariki is so closely associated with the planting of kūmera² (see, eg Best 1976:107), as optimum conditions were required in New Zealand for a successful crop. Interestingly, it is the acronitic (after sunset) rising of Matariki, in Autumn, that heralds the commencement of the harvest, though there does not appear to be any wider significance other than it simply being around the appropriate time. Perhaps, it is just a natural extension, given the importance of Matariki as an indicator of the season to come, thereby determining the optimal planting time.

Contemporary Andean potato farmers continue to interpret Matariki in order to predict the coming season, especially as regards summer rains. Immediately after the winter solstice, throughout the Andes, hundreds of groups of villagers assemble on high ridges and even the peaks of mountains (Orlove, et al. 2002). They wait for the dawn rising of the Pleiades.

The farmers believe that they can use the particular appearance of the Pleiades to forecast the timing and quantity of precipitation that will fall in the rainy season, months later (ibid.:428).

In fact, Orlove and his colleagues seem to have 'uncovered its scientific basis' (ibid.). Orlove (Anthropologist), Chaing (Climatologist) and Cane (Climatologist) visited the Andes to observe the Pleiades, record precipitation in the following season and to document the associated potato yield. Villagers in the Peruvian and Bolivian Highlands live under constant pressure from altitude and climate, which limit the growing season to rainy months between October and March. However, if soil moisture is too low seed potatoes will not produce strong shoots and if the ground freezes damage will ensue to the plants. So, at planting time, the farmers need an indication of adequate soil moisture and air temperature during the growing

season, in order that their valuable seed not be wasted (ibid.:429). The researchers 'had a strong hunch that their scheme could be connected with a well-known phenomenon of tropical climate: El Nino' (ibid.), which can affect precipitation during the wet months, but they asked how could it alter the apparent brightness of the Pleiades in June?

[The villagers] look to see whether the cluster is bright or dim, ... whether the Pleiades are visible before June 24th ... [and] they evaluate the size of the cluster ... all closely connected to the relative clarity of the atmosphere. ... In years when the Pleiades are bright, large, numerous or otherwise favorable, they plant potatoes at the usual time. However, when the Pleiades are dim, small, scanty or otherwise unfavorable, they anticipate that the rains will arrive late and be sparse, so they postpone planting by several weeks. (Orlove, et al. 2002:430)

Some of the villagers said that in extreme years they would not plant at all, as they would lose their seed.

Orlove, et al. go on to state (page 432) that their 'earliest firm date for this form of forecasting is the late 16th century' and, accordingly, they 'hypothesise that these forecasts do date to pre-Columbian times and represent a survival of ancient Andean traditions' (ibid.).

MATARIKI AND KŪMERA

On initial consideration, the Puaka and Matariki traditions may seem to suggest a cultural difference and perhaps even different origins for the groups that observe them. However, to answer this, it is necessary to first ask: as Puaka is the harbinger of the New Year in the South Island, for Moriori in the Chathams, some folk in South Taranaki and others around the Hokianga and far north, what do these groups have in common? The answer can perhaps be found in whakapapa as all recognise a pre-fleet origin so maybe the when is more important than the whence? Could the Puaka New Year have predated that based on Matariki?

Iwi, in the areas populated by 'Puaka' tribes (Hokianga/north, South Taranaki, Te Wāipounamu and Rekohu), all have a strong 'pre-fleet' tradition. The well-known canoes of the 'Great Fleet' as suggested by Percy Smith (1910) are generally regarded as having arrived around the middle of the 14th Century, or some 24 generations before 1900. Over the next few generations, the migrants imposed themselves on the so-called 'Tāngata Whenua' tribes throughout the country as is acknowledged by (eg) Ranginui Walker:

Na Toi raua ko Potiki te whenua, na Tuhoe te mana me te rangatiratanga.
The land belonged to Toi and Potiki, the mana and chieftainship belonged to Tuhoe.

The acknowledgement of mana whenua as belonging to the tangata whenua and chieftainship as coming from canoe migrants also occurred in the interior ... (1990:45).

Interestingly, there are strong whakapapa links between all the Groups mentioned as having a Puaka tradition: the ancestral canoe of Waitaha, Uruao, called in at the Hokianga on its way to Te Wāipounamu, some 45 generations prior to 1900. Traditions say that some of the migrants remained there (Beattie 1918:144, quoting Taare Te Maihāroa) and this is supported by whakapapa, as well as linguistic evidence (Rameka Cope, *Pers. Com.* 1987). The Moriori of Rekohu have a tradition that some of their ancestors were blown from Te Wāipounamu to the Chatham Islands (Tikao, p. 102). The people known as Rapuwai left Pātea in South Taranaki shortly after the arrival of the Aotea canoe and crossed to Te Wāipounamu to merge with Waitaha,

Turi, captain of the Aotea canoe, and his crew settled among them, in Taranaki. A dispute arose, and some of those involved took seven kos and stuck them in a point of land jutting out from the coast. This caused the point to become detached from the coast and it floated out to sea carrying six kos with it, leaving the other ko behind on the mainland. The drifting land with the people on it landed at Taumatatini, near Motueka. The six ko turned into a clump of bush which can still be seen at Taumatatini.

The leader of these unique voyagers was Raumano and his followers were known as Raumano after him. One of their first settlements was near Te Hoiere (Pelorus Sound) at a place called Raumano, now often called Te Mano-o-te-Rapuwai. They were a prolific people and soon spread inland. They liked nothing better than to settle round lakes as they were fond of eeling, canoeing and swimming, so that the lakes down Westland way soon harboured a large colony of them. When years later the Rapuwai and Kati Mamoe intermarried the name 'Patea' reverted to and was used to describe the amalgamated hapus

(MB140, Hii,7, Folio 6, see also Smith, 1910:127).

They probably also contributed to the southern tendency towards erratic treatment of the 'h' and 'wh' in the southern dialect, as it is traditional in Taranaki to drop the 'h'.

Traditions from a number of tribal areas attest that the earliest migrants did not bring kūmera (*Ipomoea batatas*) with them; it was introduced by later arrivals (Best, 1976:24-25 and 106-111; for Bay of Plenty, see Pio page 104; for East Coast, North Island, see Tikao page 62; for South Island, see Tikao page 64; for Taranaki, see Smith, 1910:19). Tikao also mentions (page 62) that at the time of its introduction to New Zealand, kūmera was not universally available in Hawaiiki, but only held by a certain group. Such a tradition is quite consistent with the sources above, attesting to kūmera being unknown to the earliest migrants. This, and the lack of ubiquity suggested by Tikao, may reflect that kūmera was then relatively new, even in East Polynesia. Green (2005) suggests its introduction in the 11th to 12th centuries AD, a range that sits comfortably between the dates of earliest Polynesian migration to New Zealand and the 'Great Fleet' of the 14th Century. By the time of the 'fleet' kūmera had become an important

commensal and is mentioned in conjunction with many of the canoes (Smith, 1910:87; Davidson, p. 24).

Kirch and Green point out

As we shall see, the Ancestral Polynesian lunar calendar was primarily a horticultural calendar, closely linked with the main phases of the yam crop, and with the wet-dry seasonality of the Polynesian homeland region (2001:268-9, their emphasis).

Strictly, they are correct, given the antiquity and ubiquity of the yam throughout Polynesia. However, in much of East Polynesia, the kūmera supplanted the yam as the premier crop and it was the kūmera that became of supreme importance to Māori once they had adapted its horticulture to New Zealand conditions and it was cultivation of the kūmera that was closely associated with Matariki.

After the earlier initial settlement West to East, Polynesians and kūmera both moved East to West across the Pacific, probably early in the second Millennium A.D. and certainly some time after the Uruao migrants had come to New Zealand. There now seems to be no doubt that the Kūmera originated in South America³ and was carried westward into the Pacific by human agency (Yen, 1974:245; Davidson, 1984:24, Green, 2005). Davidson goes on to say

The Kumara became extremely important in New Zealand, Hawaii and Easter Island, although in historic times it was of little significance in other parts of East Polynesia and probably did not reach West Polynesia at all (1984:24).

If the close association of Matariki and kūmera came from continental South America then that could explain why Matariki had not supplanted Puaka in West Polynesia. Dates for this transfer of kūmera cohere around the 1100–1300 AD period posited by Green (2005:46) and may be supported by the fact that Kirch and Green found **Mata-iki* as a lunation name to be absent from the Fijian and Tongic calendars, but present throughout East Polynesia (supported, for Western Samoa by Pavihi, 2007 pers. Comm.). Yams were certainly brought to New Zealand but were of limited importance compared with kūmera. Was the importance of Matariki to the cultivation of kūmera sufficient to make it supplant Puaka as the sign of the New Year? Certainly, this was so on the west coast of Te Wāipounamu, where an aged informant said 'Puaka is our new year. Matariki is an agricultural star [sic]' (cited in Andersen n.d.:105).

Recent DNA testing on chickens in Chile has proven beyond reasonable doubt that Polynesians did in fact reach South America (Storey, et al. 2007).

Elsdon Best commented that Māori

surrounded his [sic] principal cultivated food product with a network of myths, superstitions, *tapu*, and ritual performances. His procedure in the matter of cultivation of the *kumara* resembles a religious function

(1976: preface, his emphasis).

This is likely to be a reflection of the difficulty of growing it at higher latitudes, as there is no evidence of the same intensity of ritual in Island Polynesia.

So, while Matariki, and its predictive ability, were known in Te Wāipounamu, it did not replace Puaka as harbinger of the New Year; perhaps due to kūmera not becoming a reliable crop through most of the tribal area?

The suggestion that there may be a connection between kūmera and a Matariki New Year; and that this may have emanated from South America is not to deny a long Polynesian tradition of Matariki in its own right, as Kirch and Green attest to associations between Pleiades and the Green sea Turtle (*Chelonia mydas*) (p. 260); and between Pleiades and yams (*Dioscorea alata*, *D. esculenta*), 'a dominant crop in Western Polynesia' (ibid. p. 265). Best 1986, however, claims that the Pleiades New Year emanates from Asia but does not offer supporting evidence for this claim.

NOTES

- 1 North Island Puanga
- 2 North Island kūmara
- 3 Dunis (2005:94), citing a pers. Comm. from 'The Inca specialist Maria Rostworowski', advises that the very name 'kumara' is of South American origin.

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WEBSITES

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