I have used the computer program RedShift Multimedia Astronomy, Version 2 (produced by Maris Multimedia, San Rafael, CA) to look at the stars above Easter Island over a period of years. The pictures were excellent. With this program, I have determined that a solar eclipse occurred on December 31, 1842, near summer solstice, and found reports about this event in the Great Washington tablet (Sb7 - Sb8), in a hieroglyphic record of Atan’s manuscript and in a hieroglyphic record of Tomenika’s sheet (Rjabchikov 1996a:33, 36). RedShift allowed me to observe the celestial bodies on that day, and I realized why a local, Tomenika, described that eclipse. The partial eclipse lasted about 3.5 hours and would have been a horrible warning from the gods. The duration of that eclipse was unusually long and it occurred 20 years before the Peruvian slave raid in December 1862. The 20 year interval may be understood as an encoded symbol, because “twenty” is a sign of birds (the sun) in Rapanui manuscript E (Barthel 1978:149). I have also studied the sky from AD 1831 to 1842 and connected the rongorongo text of the Great Washington tablet with astronomical observations. The report about a solar eclipse is presented in the line Sa1, and such eclipses occurred on August 7, 1831, on February 1, 1832 and on January 20, 1833. In the line Sa2 there is a report about Venus and the new Moon situated together in the month Hora-nui (September/October). The inscription, in particular, reads — according to the author’s nomenclature (Rjabchikov 1987: 362-3): ... 44-17 3 24 6-6 4-6 4-4 25 4-6 6-15 ... Tua-tea, Hina - ai Haha. Hotohotu hua - tuha Hora... , i.e. “...Venus and the Moon the place Haha (the place of the dead). The stars are ripe” - the month Hora... ,” where the term Haha is a marker of death and darkness (Rjabchikov 1996b:16; 1997a:6; 1998a). In the line Sa4 the text again contains the name of the month Hora-nui (6-4 6-15-6-15 6-4 19 49 Hotu Hoharora, hotu ki (ariki) mau “The harvest of the month Hora, the harvest for the king.” Then the tablet tells of the rising of Mars, the Moon and Venus and about the bright star Pau (Halley’s comet) of 1835. For instance, that date could be October 19, 1835, when this comet was slightly brighter than the star Aldebaran (Belyaev and Churyumov 1985:76). Hence one can suppose that the conjunction of Venus and the new moon happened at the first night of the month Hora-nui, or on September 22, 1835. The computer shows the corresponding picture.

Interestingly, the tablet includes the name of the last king Maurata. He was kidnapped by the Peruvians and died in captivity (Métraux 1940: 91). The text (Sa 2/Sa 3) reports: ... 65 [a damaged glyph] 4 65-15 4 65-15 [a damaged glyph] 24 6-24 68 6-6 4-49-5-15 4-49-5-15 56 [then a severely damaged fragment] ... Rangi [roa], ata, Rangi roa, ata, Rangi roa. Harihari Honui Haha ata Mau Atua Roa, ata Mau Atua Roa – pokiki (?) ... “The Great Sky, a shadow/an image, The Great Sky, a shadow an image, The Great Sky, The nobleman Haha is carrying the shadow/image of the great (prince) Maurata, the child (?) ...” Several comments are necessary. This is the description of the birth of Maurata, as the record correlates with the corresponding religious formula included in the Manuscript E: “Ka ea te ata o te ariki. Te huhu kai rangi. Te vevero kai rangi. Tu kaka kai rangi. Tu mani kai rangi. Ata uri toou e te ariki e. Ata mea toou e te ariki e. Ata tea toou e te ariki e” (Barthel 1978: 345; comments in 179-181). The name of the prince, Maurata, consists of the two parts: (ariki) maa “supreme chief” and rata (cf. Maori rata “red hot”, Rapanui, Mangarevan rata “to welcome”, Maori rata “familiar, friendly”, Mangarevan akarata “prophet; oracle; man possessed with a demon”). His name signifies “The king (a descendant of) the sun”3, and its variant, Mau Atua Roa “The king (a descendant) of the great god” is written down on the tablet. The prince’s double name means the plurality, and here it denotes the word “great”.

Indeed the report about the mysterious star Pau is a key to the Washington tablet. Métraux (1940:53) informs us about the star: “... Pau, a star which appears in October or November. The appearance of these three stars in October foretold death and evil... Pau was sometimes bad and sometimes good.” I think that Pau (lit. sign, mark) is not Sirius (Pou), because the latter, for instance, was visible during November, October, September, August and July. On the other hand, Halley’s Comet was visible in October, 1835, in September 1682 in October 1607 and in September 1531 (Belyaev and Churyumov 1985 and the RedShift program), so these dates are near the October/November time suggested by Métraux. Thus, the star Pau is in my opinion Halley’s Comet (Rjabchikov 1994; 1997b:204; 1997c:36). Moreover, the name of Pau is present in an Easter Island place-name Hero mapa pau (Barthel 1962:105) that can be decoded as Hero ma PO Pau and signifies “Pau (with the generic determinative NIGHT) is shining brightly”; cf. Rapanui herohero “bright; crimson, red”, Maori ma “white, pale, clean”, wakama “to make white”.

I have been collecting data about the paina feast of the ancient Easter Islanders. First of all, Father Eyraud spoke of the paina as a summer festival (Brown 1996:116). J. M. Brown’s observations were summed up as follows: “The paina, coming in spring and summer when food was plentiful has a strong resemblance to one of those festivals in Tahiti and the Marquesas, which the Areoci came out of their retreat to celebrate, either the coming of the sun or his departure. ... The paina ... must have been based on a seasonal ceremony in connection with food. And its wickerwork figure had its analogy in Tahiti. On Cook’s first voyage they saw in Tiarapu “one of their eatus, or gods; it was made of wickerwork and resembled the figure of a man; it was nearly seven feet high. It was probably used in one of those seasonal festivals” (Brown 1996: 244).

A Rapanui legend (Felbermayer 1948: 83-7) informs us that, having cleaned up of the fields, the natives celebrated the paienga feast. Fedorova (1978:358) believes that it is a form of the name paina. Other examples are the following: In Tahiti a first-fruits festival is celebrated called the para’a mataliti, beginning in December or early January and invoking Roma-tane (Ro-o-ma-tane), god of Paradise (Beckwith 1970: 36). Here mataliti means “the face (sun) is rising”. A tapa figure (Heyerdahl 1976: figs. 19, 20) also named paina represents a bird or bird-
man (Kaeppeler 1987; Fedorova 1993:152), and the names of the sun god and moon goddess are inscribed on such figurines (Rjabchikov 1998b:55-6). Eventually, according to Brown (1996:244), the feasts were the chief form of the Polynesian religion, and small wonder that the sun deity (Tane, Tiki, Tan­
garoa or Makemake) had a dominant role in such ceremonies. Besides, in the Melanesian beliefs the mana (super-natural power) is associated closely with the (sacral) heat and light (Petrukhin and Polinskaya 1994:167).

It is common knowledge that the paina also celebrated the memory of a dead parent (Métraux 1940:343). I think that the term ivi (cf. Rapanui ivi “bone; parent; family; ancestry”, Mangarevan ivi “parent; family-genealogy”, Tahitian ivi “bone; corpse; place of ghosts”) can clarify it. A dead parent transformed into a ghost could help his children and vice versa. So the agricultural cult and the cult of ancestors—the early forms of the religion—were connected on Rapa Nui.

Métraux (1940:343) says about paina that “it was always celebrated in the summer, and the right time for it was indicated by the position of the three central stars in Orion.” According to Redshift 2, the full moon of December or the end of November is usually situated near these stars during the 17th-20th centuries. I suggest that the paina feast was aimed at praise and satisfaction of the sun deity Makemake before his position at the zenith. So the Vaiarenga feast (cf. Rapanui vaai “to give” and renga “yellow colour”/figuratively “the sun”) celebrated in honor of Makemake and in connection with coming of the dry season (Felbermayer 1948:75-7) could be the paina feast indeed. Compare Rapanui paina kia Makemake “to give a portion to Makemake” (Felbermayer 1967), the place name Te paina (Barthel 1962:106) [Te pai(nga) ra’a “a portion of the sun (the god Makemake)” and the Polynesian rite’s name pai atua (Stingl 1986:287-8) as well. Moreover, having deciphered the glyphs on the paina figurines, I realized that paina = Maori paina “to warm oneself, to bask; to dry” (Rjabchikov 1998b: 56).

NOTES

A partial solar eclipse can last as long as 3.5 hours (Mikhailov 1954:34; Dagaev 1978: 80), although a typical solar eclipse lasts about 2.5 hours (Larichev 1994:19). I should like to thank Dr Fred Espenak, NASA/Goddard Space Flight Center, Greenbelt, Maryland, USA who informed me about data of the solar eclipse of May 10, 1994. For instance, this eclipse in Anniston, Alabama lasted about 3.5 hours, but for many other places - about 2 - 2.5 hours (for Santa Barbara, California - about 2.7 hours). For criticism of previous variants of this letter, I am grateful to Dr Georgi Lee and Dr William Liller. Both gave me impetus to research the Rapanui folklore, script and astronomical models carefully.

2Having compared the Samoan, Maori and Rapanui folklore versions, I concluded that the name of the character Lata (Rata) meant "red hot" (Rjabchikov 1998b: 56).

3Certainly, the expression maui atua roa could be not only the prince’s name, but also a part of the religious formula “the king, (a descendant) of the great god.”

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