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Les gravures rupestres des Pléiades de la montagne sacrée du Bego, Tende, Alpes-Maritimes, France

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Résumé

Sur deux roches gravées de la vallée des Merveilles, dans la région du mont Bego, l'amas stellaire des Pléiades a été figuré par six plages majeures, entourées de quelques cupules éparses. Sur l'une de ces roches, la roche dite de « la Danseuse », l'amas stellaire des Pléiades a été figuré au-dessus d'une hallebarde gravée, en direction de l'ouest, pour évoquer le coucher héliaque. Sur l'autre, la roche dite « des Pléiades », l'amas stellaire a été figuré au sud, pour évoquer sa culmination. En tenant compte de la précession des équinoxes, il est possible de déterminer la date dans l'année du coucher héliaque des Pléiades à l'ouest si l'on connaît le millésime. Celui-ci est compris entre 3300 et 1800 ans J.-C. en comparant les représentations d'armes gravées avec celles découvertes dans des sites archéologiques. S'il est difficile de monter aujourd'hui durant le mois de mars à 2250 m dans la vallée des Merveilles en raison de la neige, l'accès était vraisemblablement possible entre 3000 et 2000 ans avant notre ère, à la fin de la période atlantique, pendant l'optimum climatique du Chalcolithique, le climat étant alors un peu plus chaud que de nos jours. ***Pour citer cet article : A. Echassoux et al., C. R. Palevol 8 (2009).***

Abstract

Rock carvings of the Pleiads in the sacred mont Bego mountain, Tende, Alpes-Maritimes, France. The stellar cluster of the Pleiads is depicted on two carved rocks in the Merveilles valley, in the mont Bego region, by six main zones, surrounded by several scattered cupmarks. On one of these rocks, referred to as "the Dancer", the stellar cluster of the Pleiads is depicted above a carved halberd in a westerly direction, suggesting the heliac setting. On the other, the rock referred to as "the Pleiads", the stellar cluster is depicted in the south, suggesting its zenith. Taking the precession of the equinoxes into account, it is possible to determine the date in the year of the heliac setting of the Pleiads in the west if the millennium is known. The latter is estimated between 3300 and 1800 years BC by comparing the types of arms carved into the rocks with those discovered in archaeological sites. Although today it is difficult to reach the Merveilles valley during the month of March because of snow, it was probably possible between

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3000 and 2000 years before our era, at the end of the Atlantic period, during the Chalcolithic climatic optimum, when the climate was slightly warmer than at present. ***To cite this article: A. Echassoux et al., C. R. Palevol 8 (2009).***

Mots clés : Mont Bego ; Gravures rupestres ; Chalcolithique ; Âge du Bronze ; Pléiades ; Précession des équinoxes ; Montagne sacrée ; France

Keywords: Mount Bego; Rock carvings; Chalcolithic; Bronze age; Pleiads; Precession of the equinoxes; Sacred mountain; France

Abridged English version

We have identified representations of the stellar cluster of the Pleiads on two carved rocks in the Merveilles valley, in the mont Bego region. These representations are both made up of six main zones surrounded by several scattered cupmarks, which are similar, in number and disposition, to the cluster of the Pleiads (M 45), in the constellation of the Bull (Fig. 1).

It is noteworthy that the stellar cluster of the Pleiads is often depicted in Antiquity by six dots, or more often seven: cylindrical seals and Mesopotamian Neobabylonian tablets, Neoassyrian stele from Tell al Rimâh, Syrian Bronze age rock carvings, Phaistos Minoan disc, Nebra disc in Germany dated to the Middle Bronze age... They thus play an important role in the agrarian calendar.

On both of these carved rocks, the stellar cluster of the Pleiads is associated with a halberd, with the handle-oriented east–west. These handles were carved into a natural crack in the rock with a perfect east–west orientation. It is obvious that the choice of each of these rocks was dictated by the east–west orientation of the crack. In the mont Bego region, natural cracks oriented east–west or north–south were often sought out by the carvers to depict halberd handles or to make up other compositions.

On the rock referred to as "the Dancer", the stellar cluster of the Pleiads is depicted to the left of the halberd, in a westerly direction, and may suggest the heliac setting, that is, it appears in the darkened sky just after the disappearance of the sun, and follows the sun several instants later.

On the rock referred to as "the Pleiads", the stellar cluster is depicted left of the halberd, in the south, suggesting its zenith.

If the representation of the stellar cluster towards the west on the rock referred to as "the Dancer" effectively depicts the heliac setting of the Pleiads at the time of the carving, then it should be possible to determine the time of year of the carving, on condition that an approximate age is known. Taking the precession of the equinoxes into account, it should be possible to determine the date in the year if the millennium is known, or the millennium if the date in the year is known. It transpires that the millennium is known (give or take a few centuries); these carvings have been dated to the Copper age and the ancient Bronze age, between 3300 and 1800 years BC by comparing the types of arms carved into the mont Bego rocks with the daggers, halberds and axes discovered in archaeological sites in the Piémont, Provence or the Rhone valley [6,7].

Using present-day astronomical data from Alcyone, the brightest star in the Pleiads stellar cluster, as well as the mont Bego geographical coordinates, it is likely that this carving was made at the end of the month of March, between 3000 and 2000 years before our era, during the Chalcolithic and ancient Bronze age.

Excavations of the Neolithic and Chalcolithic city of Charavines, on the edge of lake Paladru, have made it possible to follow climate evolution in the western Alps between 2700 and 2600 years BC with precision. At this time a climatic warming and a significant reduction in average yearly precipitation have been observed.

Moreover, $\delta^{18}O/^{16}O$ analyses of organogenic carbonate from marine mollusc shells from la grotte du Corail, in the bay of Villefranche-sur-Mer (Alpes-Maritimes), indicate a climatic warming on the Mediterranean coastline between 3000 and 2000 years before our era, at the end of the Atlantic period and before the cold period at the end of the Bronze age and Iron age.

Likewise, a climatic warming has been identified towards 2500 years BC in the Torqulertivit Imiat glacier in Greenland (Fig. 7), ([9], Fig. 10).

In the Near and Middle East, this period corresponds to a climatic optimum during which Mesopotamian cultures flourished (Fig. 7).

Although today it is difficult to reach an altitude of 2250 m in the Merveilles valley during the month of March because of snow, access may have been possible between 3000 and 2000 years before our era. At this time, at the end of the Atlantic period during the Chalcolithic climatic optimum, the climate was slightly warmer than at present and affected by a long period of drought