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## Déodat de Dolomieu, 1750-1801 Jean-Pierre de Loriol<sup>1</sup>

Who was Déodat de Dolomieu, chevalier de Malte and geologist whose name came to designate first a mineral, then a rock and at last a geographical area in the south Tyrolian Alps? – When did this last step happen? There are many publications, in french mostly, about Dolomieu, his life and scientific achievements, but it is not clear how and when the rock name «dolomite» was first used in a geographical sense as commonly done today.



<sup>1</sup> Bois-d'Ely, 1263 Crassier VD

Summary of a talk given at the VSP/ASP annual convention, Ortisei, Italy, June 2007.

Déodat de Dolomieu was born the fourth child (out of ten) and second son of the Marquis de Gratet de Dolomieu. As tradition demanded, the Marquis had laid plans for the future life of his children: the two senior girls would join religious orders, the elder son would inherit the title with the 600 ha estate and Déodat would join the Order of the Chevaliers de Malte with which the family had connections. To that end, Déodat's father had to give a large sum to the Order, ensuring thus that his son would, from the start, proceed along an officer's career path guaranteeing lifetime employment and livelihood.

The family seat, at Dolomieu, is located in the alpine foothills, some 30 km due west of Chambéry in Savoy.

The young boy's early schooling was given by the elderly parish priest and covered only basic notions. Déodat had much spare time, enough to go on long walks through the nearby subalpine hills and to wonder about the origins of the more distant high alps.

At twelve, Déodat was sent to a boarding school in Paris where he did acquire a wider culture. At fifteen, he joined a regiment in Metz, then spent a couple of years apprenticeship with the Chevaliers de Malte, to prove himself worthy of their trust. In his early twenties, back in his regiment in Metz, he met scientific minded people who introduced him to physics and chemistry. Via his family relations he joined the Paris salons where he met famous intellectuals of the day. He was already fascinated by the study of rocks and minerals. He left the army and soon travelled with the Order des Chevaliers de Malte or on his own.

He studied volcanics in Lisbon, the geology and volcanoes of Sicily, the Pyrénées, etc.; one of his great interests was the origin of

basalts. In the meantime, he was successively appointed Officer, then Commander in the Order of Malta.

In spite of his origins, he was liberal and in favour of major changes in the society. His ideas were known and he was not personally threatened during the general upheaval within France as from 1789, but many of his friends and relatives were killed during these dark years. He got away from it all by travelling a lot, in particular through the Haut Adige and the Tyrol. In 1791, he published in the «Journal de Physique», a description of a type of limestone that reacted very weakly to acids. Some samples were sent to colleagues and to Nicolas-Theodore de Saussure in Geneva, the son of Horace-Benedict de Saussure, who analysed the rock and described it in 1792, giving it the name of «dolomie» in honour of Dolomieu. The first analysis, published in 1792 by Nicolas-Theodore de Saussure mentioned the presence of aluminium as well as that of magnesium in the rock. This was accepted and carried for some time by several authors. Finally, in 1800, Saussure repeated his analysis with more accuracy and gave at last the correct definition of dolomite as we know it today.

In 1795, Dolomieu was appointed Professor at the newly created «Ecoles Centrales» in Paris, and in 1796, Inspecteur des Mines: Dolomieu had become a famous french scientist in his own right.

In 1798, he was asked by Bonaparte to join the scientific staff of a secret expedition that turned out to be aimed at the conquest of Egypt. He fell ill a few months after landing in Egypt and requested to return home which he did in early 1799, but his ship had to seek refuge from a storm in a harbour of the Royaume des Deux Siciles. Unfortunately for him, the kingdom was enemy of revolutionary France and personally against Dolomieu considered traitor to the Order of Malta. Taken prisoner, he spent 21 months in a damp cell in the fortress of Messina. The

whole scientific world agitated for his release, to no avail, until victory by the French at the battle at Marengo in early 1801 obtained his release.

Upon his triumphant return in Paris he was made director of the Musée d'Histoire Naturelle and professor of Mineralogy. Not feeling too well, he went to stay with his sister in the Massif Central. He was planning to visit a german colleague to discuss the origins of basalt when his health took to the worst and he died on 26 november 1801, aged 51.

Dolomieu wrote abundantly, mostly about volcanoes, earthquakes, mountain ranges and minerals, but surprisingly he is known to us because of his noticing in the Tyrol «un genre de pierres calcaires très peu effervescentes avec les acides»: that was certainly not part of his main geological centre of interest.

The original question remains unanswered: at what time did the term «dolomite» enter the geographical domain? cursory queries have revealed that:

- The 1863 Baedeker «Italie septentrionale», 2<sup>ème</sup> edition, p. 86, describing the road from the Brenner Pass to Bozen carries the words «...près de Steg, on découvre à l'Est les blanches parois de Dolomite du Schlern (2631 m)».
- In the 1881 very official German «Andree's Handatlas», p. 42-43, a map of the Österreichischen Alpenländer shows a zone «Südtiroler Dolomit Alpen».
- Daniel Bernoulli is aware of a book published in 1864, reporting on earlier trips: Gilbert, J. and Churchill, G.C. 1864: The Dolomite Mountains. Excursions through Tyrol, Carinthia, Carniola and Friuli in 1861, 1862 and 1863; Longman, Roberts and Green, London, pp. 576.

One can therefore assume from the above references that the transition from geological to geographical usage had become common already some fifty years after his death.

## Literature of interest

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