



# Towards the development of supplements to the Gazetteer of Planetary Nomenclature

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## Abstract

Various international organizations are working on publishing databases that supplement the official Gazetteer of Planetary Nomenclature. This paper focuses on the online Planetary Nomenclature Pronunciation Guide created by ICA Commission on Planetary Cartography.

## 1. Introduction

The present day official Planetary Nomenclature Gazetteer is maintained for IAU by personell of the USGS on their website [1]. It reflects decisions by IAU Working Group for Planetary System Nomenclature. There are needs from various parts of the planetary scientist and planetary cartographer community which this database does not meet, therefore it is necessary to establish extra databases in addition to this official one which can provide data types that are not present at the USGS website.

## 2. The International nature of the planetary nomenclature system

The presently used guideline for naming topographic planetary surface features have been settled in the early 1970s when – in response to the need for the first set of new topographic names in the Space Age (on Mars) – Carl Sagan and his colleagues have stated that it is important to make sure that the end result [of the new nomenclature system] “will be a nonprovincial distribution of nationalities, epochs, and occupations - a distribution that our great-grandchildren can be proud of” [2]. This laid down the international character of planetary nomenclature which is also supported by the fact that descriptor terms are in Latin and specific parts of placenames are in the language of origin or in a neutral Latin form. Although this principle is sometimes offended (for example in the case of some names of Io) in practice, it is still a governing rule of planetary

nomenclature. Since some – and in the future, presumably more and more – names originate from nations that use a non Latin writing system, transliteration or transcription of names should be unambiguous and reversable. It is also a major question why would all nations of the Earth accept Latin or Romanized forms of these names being the only, official forms, once the principle of planetary nomenclature is to be truly international, not placing any nations ahead of any other. It does not seem to be right for example to have a Chinese name written in Latin characters in a planetary map published for use by Chinese schoolchildren. It would first be necessary to define which transcription / transliteration system IAU uses in any particular language when they form the official Romanized version. This definition is now absent in the Gazetteer rules. Secondly it would be needed that those countries/nations who wish, could use the planetary nomenclature system in their writing system (Chinese, Japanese, Arabic, Russian etc). In other words: writing system should be considered to be equally capable of transmitting planetary surface feature names. This is the case now for terrestrial names – which is not regulated by one single commission – but not for planetary names where only one official form exists. It is now a tendency to formulate one single internationally accepted and used form for any geographic name in the Latin alphabet, to make international communication easy and unambiguous, especially in international trade. However, for planetary names, they belong to all nations, therefore their use in all nations’ own languages should be equal. Some form of regulation is needed: this would allow only one form in any particular writing system.

During the process of localizing planetary nomenclature, it may be needed to translate (or to define local equivalents of) descriptor terms. It is a natural process: this “work” have been done in several countries by popular science authors, cartographers, internet users, however, this usually

results in multiple forms for the same descriptor term. A local regulation is therefore necessary. Such recommendations have been published for the Hungarian language in 2010 [3,4]. Such a system has also been established for stratigraphic nomenclature [5].

### 3. A Pronunciation Guide

A step towards this goal is to create a database of the pronunciation of planetary surface names, since transcription – a method of conversion between writing systems – is based on phonetic conversion between different languages (transliteration is based on letter-to-letter conversion). The Pronunciation guide is therefore being established by the ICA Commission of Planetary Cartography. The Guide contains audio files (later the phonetic notations using the International Phonetic Alphabet). These files have been recorded by native speakers of the particular language. Since planetary names are representing several languages which a reader does not speak, it may be useful by anyone from TV news readers to astronomy teachers etc. who have to (or should) say planetary names aloud. Pronunciation of most names are unequivocal, however some historic, mythological names have made problems even for native speakers. In the case of Latin and Ancient Greek languages, we have consulted university teachers of Latin and Greek and followed pronunciation rules of the Medieval Latin which may be closest to the Latin used by those astronomers who first named features on other planetary bodies in Latin, when Latin was the language of international and scientific communication.

### 4. Current status of the database

The database currently contains approx. 550 audio files, i.e. names recorded by native speakers. These feature names represent all larger features: the smaller ones are not included. The audio files contain the specific part of names. Descriptor terms are in Latin, therefore we have created separate audio files for them. Its basic part is using Medieval Latin pronunciation, but since it is problematic – even Medieval Latin was pronounced differently in various parts of Europe, depending on the sound of the locally used language – we have recorded “Medieval Latin” pronunciation of descriptor terms by speakers of various European languages.

The database is in continuous development. It is planned to be published online during the year 2010 on the website of ICA’s Commission on Planetary Cartography. The commission’s new projects [6] will develop additional elements which will supplement IAU’s official Gazetteer of Planetary Nomenclature.

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