

PRINCIPLE OF PRIORITY

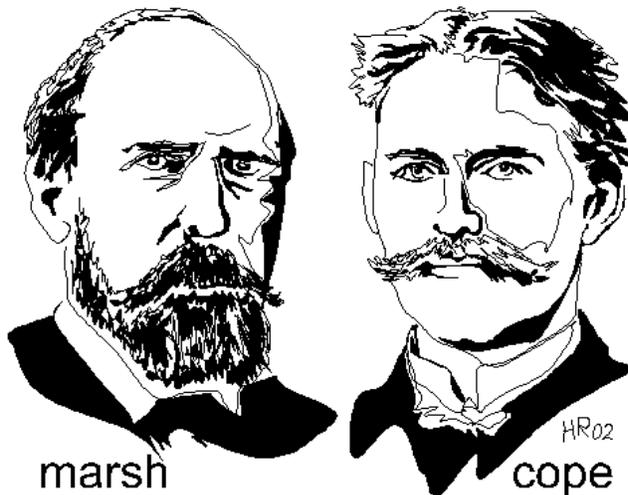
e5 The Plenary Power Rule

< 1913, appropriateness, *Hyracotherium* not *Eohippus*; taxonomic names >

Dr. Shaw, in his scientific description of 1799, gave [it] the name *Platypus anatinus*, from Greek and Latin words meaning ‘flat-footed, duck-like’. However, when it became known that *Platypus* had already been used to name a group of beetles, a new term had to be adopted. The official scientific name became and remains *Ornithorhynchus anatinus*, with the first word meaning ‘bird-Lamarckian [sic] snout [Gk *ornith-* bird + Gk *rhynchos* snout or bill]’.. —Australian Platypus Conservancy.¹

So science walks, with gait serene, / her crown an olive sprig. / Intent alone on holy truth and /otium cum dig[nitate][retirement (leisure) with dignity]. —scoffs an anonymous wit, re: the “Bone Wars”.²

Horses inhabited Europe and North America as long ago as the Eocene. The remains of one such, found near London, England, was not originally recognized to be a horse. That primitive horse resembled a hyrax (coney), a rodentlike ungulate (hoofed) animal (**Figure e05.1**) that exists in Africa and extreme southwestern Asia. The fossil was given the genus name *Hyracotherium* by Richard Owen in 1841³ and being then of little interest was largely forgotten. Later, a more complete record of horse evolution in North America⁴ allowed the London fossil to be identified as being of the genus *Eohippus* that had become well described and was fittingly named, it would seem, by (feuding)⁵ Yale Peabody Museum curator Darwinian **Othniel Charles Marsh** (1831-1899) but not by initially Cuvierian (**Footnote e05.1**) and later neo-Lamarckian (**Footnote e05.2**) paleontologist **Edward Drinker Cope** (1840-1897) in the years 1875 and 1876:



†*Arenahippus pernix* (Marsh, 1876) [*Eohippus pernix* Marsh, 1876]

-- †*Eohippus angustidens* (Cope, 1875) Marsh, 1876 [*Hyracotherium angustidens* Cope, 1875]; *Eohippus validus* Marsh, 1876.⁶

Should the misidentified and hence misleadingly named London fossil be relabeled? The answer, as of now, is no. “At the core of the zoological and botanical codes,” reminds S. Knapp, “is the type specimen. Types bring order and stability to taxonomy because they are the specimens upon which the original author based his or her descriptions, and which ultimately fix the name.”⁷ The Plenary Powers Rule, recommended in 1843⁸ and adopted in 1913, provides that priority shall prevail unless a later

name has been so widely accepted that its suppression in favor of a forgotten predecessor would be confusing and lead to instability. Thus, exceptions to strict priority cannot be asserted by individuals but must be officially granted by the International Commission of Zoological Nomenclature⁹ acting under its plenary powers. The procedure is somewhat cumbersome and enforcement can be heavy handed as, to the once distress of children, *Apatosaurus* for *Brontosaurus*, and, to the confusion of medical people, *Stegomyia aegypti* for *Aedes aegypti* (the mosquito that transmits yellow fever and dengue), and is sometimes best waved, as in the case of *Lefalophodon*. John Alroy tells that tale:¹⁰

In 1872, Edward Drinker Cope, following his standard practice during the decade long Marsh-Cope ‘Bone Wars,’ sent a telegraph to Philadelphia giving a brief description of a new fossil uinthere, *Loxolophodon cornutus* [obliquely crested molar teeth, horned] [Uinthere (Uinta (Co., SW Wyoming) beasts) were large herbivorous mammals, not belonging to any living order, that existed between 34 and 56 million years ago (Eocene) in North America and Asia]. But the transmission was garbled and the name was published almost immediately as *Lefalophodon discornatus*. Within days

Cope's hand-written manuscript arrived and was published with the correct name, thereby creating yet another nightmarish priority problem. The species is now renamed *Eobasileus cornutus* [dawn-ruler, horned].

No one has petitioned for the inappropriate, though prior, name *Hyracotherium* be replaced by the name Cope and Marsh coined for the first horse: *Eohippus*, which means "dawn horse."

Publishing instructions for scientists, are: ¹¹

Complete taxonomic names consist of the binomial Latin name, name(s) of the original author(s), and the original date of publication ("*Coccosphaera pelagica*, Wallich, 1877"). Where the species name has been transferred to another genus, the name(s) of the author(s) and the publication date of the new combination must be given. For example, "*Coccolithus pelagicus* (Wallich, 1877) Schiller, 1930," means the organism was transferred from *Coccosphaera* to *Coccolithus* by Schiller in 1930.¹²

For paleontological terms and usage:

Use common names of organisms in text; for example, "radiolarians," not "Radiolaria," and "diatoms," not "Diatomaceae." The only exception is when the taxonomic category itself (the Order Radiolaria, for example) is the subject under discussion.

Correct usage of names in publications are:

nannofossil(s), radiolarian(s), diatom(s), silicoflagellate(s), foraminifer(s).

Abbreviated forms like "nanno," "nannooze" or "foram," are not acceptable in formal writing.

The common names of organisms are used frequently as modifiers, in both their noun and adjective forms, when naming sediments. If the fossil is the major component in the sediment, the noun form is used, as in "diatom ooze." If the fossil is a relatively minor component but still requires mention, then the adjective form is used, as in "diatomaceous clay." Note that "radiolarian" and "nannofossil" serve as both nouns and adjectives.

Appreciative of the importance of priority, which can well secure for a paleontologist a position and funding for research, an unwritten code of conduct is that once a preliminary description of a fossil has been published, other researchers who have examined the fossil and would write about it may not until the completed description by the original worker is published. That wait can be a lifetime.

Footnote e5.1 "Cope [at thirty six] had held the Cuvierian view in an 1867 article, in which he wrote that 'a great change of temperature' at the end of the Cretaceous had destroyed all animal life. 'Then began again . . . the introduction of entirely new forms of animal life more like those of modern times,' he concluded, calling the early Tertiary 'the morning of the sixth day' in the Mosaic record of the Creation. [However, by 1873 (at forty two) he had proved to his satisfaction that] change took place by migration and not re-creation."—David Rains Wallace.¹³

Footnote e5.2 Cope championed the false notion that early developmental stages lessen due to disuse and in coping with a changing environment new stages added on to the end of the developmental process result in coordinated speciation. (*Neo-Lamarckian* is a term coined in 1885 by Alpheus Packard for evolutionary thinking—different from neo-Darwinian—in the American School begun by himself, Alpheus Hyatt and Edward Drinker Cope).¹⁴ □

Figure e5.1¹⁵ *Procavia capensis*
Rock hyraxes are terrestrial animals that live in groups among rocks and are active by day. Primarily vegetarian, rodentlike but tailless and short-nosed. They appear to be an unprogressive offshoot derived from the hoofed-mammal stem: The toes (four front, three back) have small "hoofs." The jaw has four chisellike lower incisors, a pair of curved continuously growing upper incisors, and high-crowned molars.

