

Malacology or Conchology?

Robert Robertson

Department of Malacology
Academy of Natural Sciences
Nineteenth and the Parkway
Philadelphia, PA 19103, USA



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The choice of which of these two words to use depends not, as one might suppose, on etymology, priority, or the original intentions of the proposers, but on usage (and emotions!). The purposes of the present paper are to elaborate on these ideas, to record some apparently new insights on this old polemic, and to advocate use of *malacology*. This paper does not concern the pros and cons of studying living animals or shells.

The two competing terms for the study of the phylum Mollusca are *malacology* and *conchology*. To most modern biologists, *malacology* means the study of molluscan animals (soft bodies plus shells if present) and *conchology* means the study of just their shells. The Greek word *malakos* and the Latin word *molluscus* apparently are not cognates, although they both mean soft. The Greek *konche* means *either* snail or shell (whence the English conch). In two editions of an excellent, scholarly book on the history of shell collecting, S. Peter Dance (1966, 1986) has favored *conchology* for the study of whole mollusks. Dance quotes various authors to show that *konche* and its diminutive *konchylion* could mean a shell-bearing mollusk, not only its shell. I give reasons here for favoring the term *malacology*, in answer to Dance (1966, 1986).

The polarity is deep-seated. In the United States there are the American Malacological Union and the Conchologists of America. In the British Isles there are the Malacological Society of London and the Conchological Society of Great Britain and Ireland, etc.

The word *conchyliologie*, anglicized to *conchology* by da Costa (1776), was introduced in 1742 by the aristocratic cabinet naturalist Antoine Joseph Dezallier [or Desallier] d'Argenville in the book *L'Histoire Naturelle éclaircie dans deux de ses parties principales, la Lithologie et la Conchyliologie, dont l'une traite des Pierres et l'autre des Coquillages* (Paris). The book primarily concerns minerals, fossils, and shells. D'Argenville defined *concha* and *coquillage* as an animal with a shell ("coquille") plus its contained soft body or "fish" ("poisson"). Expressly excluded from the book are most "*mollusca*," which to him meant soft-bodied animals without shells. Curiously, d'Argenville illustrated six terrestrial slugs. There are also, besides molluscan shells, illustrations of echinoids, barnacles, organ-pipe coral (*Tubi-*

pora), serpulid worms, etc. There were no illustrations of chitons, octopuses, squids, or cuttlebones.

The word *malacologie*, also French and anglicized in 1836 to *malacology* and apparently a contraction of *malacozoologie*, was one of two terms introduced in 1814, 72 years after d'Argenville, by the controversial and perhaps brilliant field naturalist Constantine Samuel Schmaltz Rafinesque. He meant by the term the study of "Mollusques" as he understood them ("Classe Malacosia"). His second word, *anopologie*, was for a broader study. (One wonders how serious he was.) Rafinesque had no companion term for the shell bearers (or Conchifera). It is likely that Rafinesque had more-or-less the same concept of "Mollusques" as Cuvier (1817), who included chitons and cephalopods in the group, but also ascidians, brachiopods and cirripedes. Characteristically, Rafinesque proposed *malacologie* in a now-very-rare booklet, this one verbosely entitled *Principes Fondamentaux de Somnologie ou les Loix de la Nomenclature et de la Classification de l'Empire Organique ou des Animaux et des végétaux contenant les Règles essentielles de l'Art de leur imposer des noms immuables et de les classer méthodiquement* (Palermo).

H. M. D. de Blainville (1825), in the text of his *Manuel de Malacologie et de Conchyliologie* (Paris and Strasbourg), did much to disseminate the word *malacologie* and to bring about use of the two terms in modern times. In two ways, de Blainville showed his preference for *malacologie*: his use of the two typefaces, and his stating that *malacologie* is a part of zoology while *conchyliologie* is an "art" (title page).

Both terms were proposed before the modern phylum Mollusca was conceptualized. But let us not have a new term! (testaceology, the study of shells, and molluscologie are already extinct).

D'Argenville was pre-Linnaean, but the binomial nomenclatural rule of priority is hardly operative. Original intentions and etymology seem more relevant, but unfortunately do not pertain. The first syllables of *mollusk* and *malacology* are conveniently similar. Quite properly, *malacozoology* had been part of zoology. Also, softness is common to the bodies of all mollusks, while shells are not. Rafinesque came closer to the modern concept of the Mollusca than d'Argenville, who (as shown above)



Figure 1. Constantine Samuel Schmaltz Rafinesque (1783–1840), who proposed the term *malacologie* in 1814. The authenticity of this portrait has been questioned (LaRocque, 1964).



Figure 2. Antoine Joseph Dezallier d'Argenville (1680–1765), who proposed the term *conchyliologie* in 1742. From the engraving in Favanne and Favanne (1780).

grouped in it a variety of shelly animals. In a later publication, Rafinesque did include cephalopods in his Mollusques. It is admitted that these are slender arguments for *malacology*. But is the case for *conchology* any better? Even though to an ancient Greek malacologia might have meant a discourse on anything soft, to me, a biologist, the term *malacology* is preferable to *conchology* for the modern branch of zoology concerning mollusks. However, the dual usage no doubt will continue.

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