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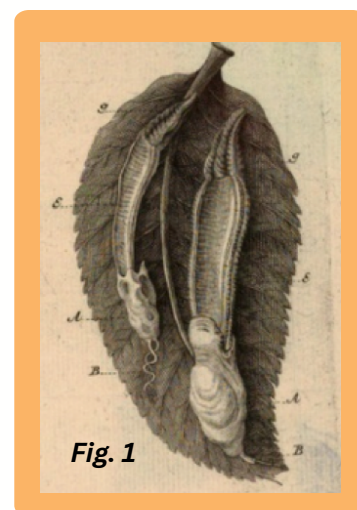


Mo-Ku-Sin: *Lysurus mokusin*

Submitted by: Don Pfister, MSA Historian

A [paper](#) recently published in the [Journal of Modern European History](#) by Di Lu drew my attention to this interesting phalloid fungus and its significance in east-west science. This journal may not be seen by mycologists, and so I call attention to it here. It is of interest for teaching and in research and it exposes an early episode in mycological exploration.

Mo-Ku-Sin is the Chinese name used for what came to be known as *Lysurus mokusin*. It was first mentioned and illustrated in western literature by Jesuit Pierre-Martial Cibot who was posted in Beijing from 1760 until his death in 1780. Many of the early discoveries of plants, animals and fungi were facilitated by missionaries. Two examples of mycological discoveries by missionaries are included here -- Cibot and Pere Jean-Marie Delavay. Lu's paper reports on Cibot's mycological writing and the cross-cultural aspect of his observations. At the center of Lu's work is the fungus Cibot discussed in an article entitled *Fungus Sinensium Mo-Ku-Sin Descriptus* in 1774. Cibot illustrated (see Fig. 1) the fungus (that illustration was much copied in the literature for over 150 years (see Fig 3.)) but he did not give a binomial, rather he used the Chinese term -- Mo-Ku-Sin.



The binomial, *Phallus mokusin*, assigned in 1781 by Linnaeus, the younger, son of Carl Linnaeus. Linnaeus took the Chinese name to form the epithet. Much later, Lloyd thought the epithet referred to a locality in China (Lloyd 1917). Fries (1832) transferred *Phallus mokusin* to *Lysurus*, a genus he created. *Lysurus mokusin* is the type species of the genus *Lysurus*.

Controversy over taxonomic placement of this genus followed its description. It is now placed in the Phallaceae. Material only came to Europe when specimens collected October 23, 1889, in Yunnan, China by Pere Jean-Marie Delavay, were dispatched to N. T. Patouillard in Paris. The Delavay specimens allowed the first detailed study of the morphology of this stinkhorn (see Fig. 2) (Patouillard, 1890). Patouillard's study clarified the family placement. Delavay specimens are in the Patouillard collection at Harvard and in the Ellis collection at the New York Botanical Garden. Presumably Patouillard and Ellis were in conversation and exchanged specimens in reference to Ellis's work on *Lysurus texensis* Ellis ex Saccardo, generally considered to be a synonym of *L. mokusin*.

Of interest to North American studies, but not cited by Lu, is a paper by Rea and Heidenhain (1955). Paul Marshall Rea (1878 – 1948) made extensive notes and illustrations. After Rea's death, at the request of Alexander Smith at the University of Michigan, Breta Heidenhain assembled Rea's notes for the paper. Rea's work was based on collections he, his friends and neighbors made of *L. mokusin* around Santa Barbara, California from 1936 – 1947. He documented several hundred collections, surely a record. Rea's specimens are now at the University of Michigan. His quest was driven by the question of the morphological variability in the species. Indeed, the variability observed has spawned several names now considered to be synonyms. *Lysurus mokusin* is widespread in the northern hemisphere and in Australia based on the records in the Global Biodiversity Information Facility (GBIF). One suspects that some of these named species might be recognized when more intense studies are undertaken. This has been shown to be the situation regarding *Phallus indusiatus* that is now known to conceal hidden diversity detected through careful morphological study and genetic information (Cabral et al. 2019).

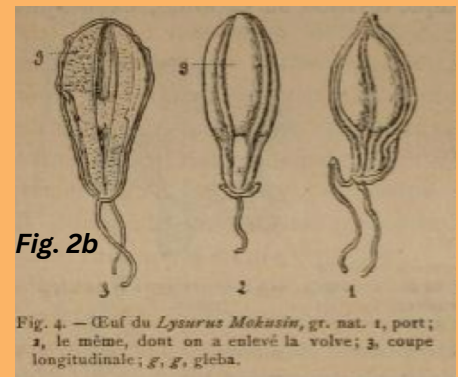


Fig. 4. — Œuf du *Lysurus Mokusin*, gr. nat. 1, port; 2, le même, dont on a enlevé la volve; 3, coupe longitudinale; g, g, gleba.

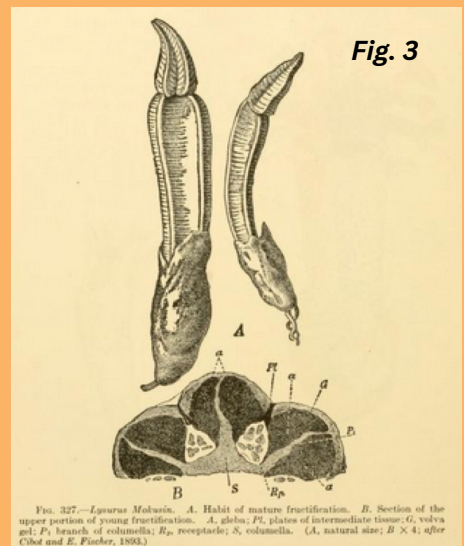


FIG. 327.—*Lysurus Mokusin*. A. Habit of mature fructification. B. Section of the upper portion of young fructification. A, gleba; PI, plates of intermediate tissue; G, volva; P, branch of columella; R, receptacle; S, columella. (A, natural size; B X 4; after Cibat and E. Fischer, 1955.)

In an era when names of organisms have been subjected to scrutiny because of colonial or racial overtones, it is heartening to have an epithet that is derived from an authentic local source.

Literature

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