THE TYPE MATERIAL OF *CYPRAEA SEMIPLOTA* MIGHELS, 1845 (GASTROPODA: CYPRAEIDAE)

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This paper addresses the status of two putative "type" lots of *Cypraea semiplota* Mighels, 1845 (Gastropoda: Cypraeidae). In 1949, while preparing a catalogue of the taxa and publications of Jesse Wedgwood Mighels, I had the opportunity to review the extent of his type material. In particular, I emphasized the fact that Mighels's own collection were sold to the Portland Society of Natural History (Maine) in 1846, and were totally destroyed by fire in 1854 (Johnson, 1949: 214). However, I then noted that Mighels had previously exchanged or sent type specimens of many of his species to various collectors, whose collections are now in the Museum of Comparative Zoology [MCZ] (C. B. Adams, J. G. Anthony and the Boston Society of Natural History), the American Museum of Natural History [AMNH] (J.C. Jay) and the Natural History Museum, London [BMNH] (H. Cuming) (Johnson, 1949: 217). Thus, I was able to select lectotypes for certain of Mighels's species from this extant type material.

For *Bulla punctostriata, Cypraea semiplota, C. insecta, Pleurotoma rugosa* and *P. pumila*, as there were no extant type specimens, I then designated "neoholotypes" (*i.e.* neotypes) from specimens in the MCZ collections (Johnson, 1949). These specimens were from the collection of W. H. Pease, who was probably the first conchologist to re-collect many of Mighels's Hawaiian species. The neotype of *C. semiplota*, MCZ 176989, was from a lot of four specimens, collected by Pease and identified by Roberts (1885: 194, pl. 19, figs. 31, 36, 37), who seems to have been the first to illustrate this species.

At that time, I obviously could not predict that my 1949 neotype designations subsequently would become invalid

under the International Code of Zoological Nomenclature as enacted in 1961 and amended most recently in 2000. In 1949, the then-operative "Règles Internationales de la Nomenclature Zoölogique" had no provision governing neotypes (Schenk & McMasters, 1948: 7-9). ICZN Article 75 (which is substantively similar in the 1961, 1964, 1985, and 2000 editions of the Code) now requires that all neotype designations, including those published before 1961, must be accompanied by "a statement that it is designated with the express purpose of clarifying the taxonomic status or the type locality of a nominal taxon," ICZN Article 75.3.2, and satisfy five other procedural requirements. More generally, a neotype "is not to be designated as an end in itself, or as a matter of curatorial routine, and any such neotype designation is invalid." ICZN Article 75.2. Thus, by retroactive application of the ICZN, the five neotype designations in my 1949 paper are, regrettably, invalid pursuant to ICZN Article 75.7.

Recently, Boyko & Cordeiro (2001: 46) reported that they had found specimens of *C. semiplota* in the AMNH for which they wrote that: "catalog books deposited in the AMNH by Witthaus list these specimens (AMNH 22824) as 'type species' received from Pease." They then claimed that this lot, comprising nine specimens, was a syntype lot, and that "Johnson's 'neoholotype' is hereby suppressed by the rediscovery of this type material" (Boyko & Cordeiro, 2001: 47). Unfortunately, these authors were wrong on two counts, as explained below. In their haste to correct the errors of their learned predecessors, Boyko & Cordeiro themselves erred.

First, AMNH 22824 does not constitute original type material. William Harper Pease did not become interested in Hawaiian shells until the late 1850s, when he began extensive collecting of shells after permanently settling in Honolulu (Oahu), the type locality of many of Mighels's species. Pease was not known to have received original

specimens from the Mighels collection, as had Anthony, C. B. Adams, and Cuming in the 1840s. Further, according to Kay (1975: 19), Mrs. Witthaus purchased only such specimens from the Pease collection in 1872 as she desired, and the rest was sold, that same year, to Louis Agassiz for the MCZ. The expression "type species" probably meant that at one time Pease intended to establish a new genus-level taxon with *C. semiplota* as the type species. It does not imply that Pease had received type specimens from Mighels. Therefore, AMNH 22824 is not part of the original type series of *C. semiplota* and is not a syntype lot. ICZN Articles 72.4, 73.2.

Second, the action taken by Boyko & Cordeiro does not count as a "suppression" of my neotype designation, because that designation was already invalid under ICZN Article 75.7, to which Boyko made no reference. If these authors had referred to the current Code, they might have seen ICZN Recommendation 75C ("An author who published an invalid neotype designation before 1961 should if possible be given an opportunity to make it valid before another author designates a neotype for the same nominal species-group taxon") and ICZN Recommendation 75D ("If an invalid neotype designation was published before 1961, the specimen then designated should be given preference when a neotype for the same nominal species-group taxon is validly designated)." These two recommendations reflect the same elementary principles of allowing prior authors to remedy their actions that were retroactively made invalid, and of maintaining taxonomic stability by avoiding the needless upsetting of neotype designations.

Since I am not a specialist in the Cypraeidae, I invite the cowrie experts to determine whether it is necessary to designate a neotype for *C. semiplota* and, pursuant to the ICZN, I recommend that the MCZ 176989 be given first consideration for any such renewed designation. I similarly

encourage these cowrie experts to determine if a neotype is needed for *C. insecta*; those who are specialists in the Turridae can make this determination for *Pleurotoma rugosa* and *P. pumila*; specialists in the Cephalaspidea can make this determination for *Bulla punctostriata*. As before, the MCZ specimens that were chosen as neotypes in 1949 should be given first consideration for any such renewed designation.

In conclusion, this paper demonstrates all too well that "two wrongs do not a right make." I trust that those who are preparing type catalogs or curating type collections (1) will properly analyze old neotype designations pursuant to the relevant provisions of the ICZN, (2) will provide other authors with the opportunity to correct their neotype designations that are retroactively invalid, and (3) will not erroneously claim that subsequently collected specimens are syntypes.

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Literature cited

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