



Newsletter of the Freshwater Mollusk Conservation Society
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**It's Time to Plan, Submit, and Get Ready for
 our 2017 Symposium in Cleveland, Ohio!**

Becca Winterringer, Local Co-chair

As you probably know by now, the 10th Biennial FMCS Symposium will be held on March 26 -30, 2017, at the Cleveland Downtown Marriott at Key Center, in Cleveland, Ohio, USA. Not only is Cleveland still celebrating the 2016 National Basketball Association Championship win and decompressing from the Republican National Committee Convention, but the city

Contributed Articles

The following articles have been contributed by FMCS members and others interested in freshwater mollusks. These contributions are incorporated into *Ellipsaria* without peer review and with minimal editing. The opinions expressed are those of the authors.

Match of *Pleurocera gabbiana* (Lea, 1862) to Populations Cryptic Under *P. simplex* (Say, 1825)

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In the first note of this series (Dillon 2016), I reported the discovery of two reproductively isolated populations of pleurocerid snails cryptic under the nomen "*Pleurocera simplex* (Say 1825)" in Pistol Creek, Maryville, Tennessee – one demonstrating "fat" shell morphology, and the other "skinny". In a second note, Dillon and Robinson (2016) matched the fat population (S6f) both genetically and morphologically to a sample from the type population of *Pleurocera simplex* collected at Saltville, Virginia (S5). The skinny population (S6s) was matched to population S1, previously sampled by Dillon and Robinson (2007) from Indian Creek in Lee County, Virginia. Here I report a match for populations S6s and S1.

I initially reviewed descriptions, figures, and extant type material for all six nominal synonyms of *P. simplex*: *warderiana*, *subsolida*, *densa*, *vanuxemii*, *prestoniana* and *aterina*. All of these, however, demonstrated the relatively enlarged body whorl characteristic of typical ("fat") *simplex*. I then conducted a more general (and admittedly rather undirected) review of all type material attributed to the genera *Melania*, *Goniobasis*, *Elimia* or *Pleurocera* held in the U.S. National Museum or the Academy of Natural Sciences of Philadelphia. And my eyes happened to fall on USNM 118991, the holotype for *Goniobasis gabbiana* (Lea 1862), shown in Figure 1.

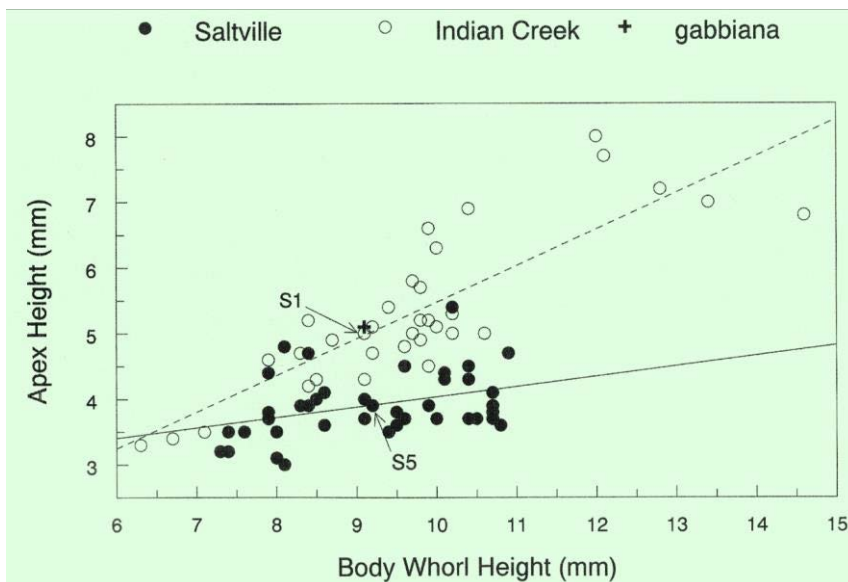
Isaac Lea first published a brief Latinate description of *Goniobasis gabbiana* in his (1862) description of the new genus *Goniobasis*, followed by a more complete (English) description and figure in 1863. His locality data were extremely vague: "Tennessee Prof. G. Troost; Alabama Prof. Tuomey." The species nomen was passed along as valid by Tryon (1873) but was essentially forgotten by Goodrich, who listed it as a "species in doubt" in his 1930 Alabama paper but neglected it entirely in his 1940 review of the Pleuroceridae of the Ohio River drainage system, which covered most of Tennessee. Thus, although still valid, *Goniobasis* (or "*Elimia*") *gabbiana* was not included in the more recent reviews of Burch (1989) and Turgeon et al. (1998). In addition to the holotype, the USNM holds just two lots labeled *Goniobasis gabbiana*, both from the nineteenth-century malacologist A. G. Wetherby, neither matching the type. To my knowledge, no pleurocerid lots are held under the nomen *gabbiana* in any other North American museum.



Figure 1. From left: An exemplar shell from population S1 of Indian Creek, the holotype of *Pleurocera gabbiana* (USNM 118991), and an exemplar shell from topotypic population S5 of *Pleurocera simplex*. The scale bar is marked in mm. A = Apex height, B = Body whorl height.

On Figure 2, the holotype of *P. gabbiana* is plotted by its apex height and body whorl height. The match in relative shell dimensions between USNM 118991 and *Pleurocera* population S1 of Indian Creek would appear to be nearly perfect. The evidence thus suggests that *Pleurocera* populations S1 at Indian Creek and S6s at Pistol Creek may be identified as *Pleurocera gabbiana* (Lea 1862), a nomen here revived after 150 years of obscurity.

Figure 2. Shell apex height (A) as a function of body whorl height (B) in pleurocerid population S1 sampled from Indian Creek, and in topotypic population S5 of *Pleurocerasimplex* sampled from Saltville. The exemplar shells illustrated in Figure 1 are noted with arrows. Graphed as a cross is the holotype of *Goniobasis gabbiana* (USNM 118991).



It is interesting to contrast this situation with those described by Dillon and Robinson (2011) for *Pleurocera catenaria* (Say 1822), Dillon (2011) for *P. clavaeformis* (Lea 1841), Dillon et al. (2013) for *P. canaliculata* (Say 1821), and Dillon (2014) for *P. semicarinata* (Say 1829). Intraspecific shell variation is so extreme in all four of those cases that nineteenth-century taxonomists recognized multiple nominal species, and even multiple genera, within single conspecific populations. Here, we document the opposite situation, where interspecific shell variation is so slight that twentieth-century taxonomists have not distinguished any differences.

Our subsequent field surveys have uncovered 58 additional populations apparently referable to *P. gabbiana* -- often mixed with typical *P. simplex* -- locally abundant in small streams of the Tennessee River drainage from the vicinity of St. Paul, Virginia, southwest perhaps 100 km to Madisonville, Tennessee (Dillon and Kohl 2013). As we mount expeditions to catalog the rich biodiversity yet lying undiscovered in the most remote corners of the earth, we might profitably pause to examine the less exotic but equally valuable biodiversity we have too often overlooked in our own backyards.

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