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## CRITIQUE 'PROCEEDINGS OF A SYMPOSIUM ON RARE AND ENDANGERED MOLLUSKS (NATADS) OF THE U. S. COLUMBUS, OHIO 1971'

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There is no disagreement with the purpose of the symposium on rare and endangered freshwater mollusks, but there is disagreement with the content of the proceedings and the fact that available expertise was not brought to bear on the problem. Correspondence with several eminent malacologists, including Dr. Henry van der Schalie, University of Michigan, revealed that none was invited to contribute to the symposium.

The title of the proceedings indicates that the symposium was dedicated to discussions of rare and endangered naiads or mussels. However, the principal paper by Stansbery dealt with both mussels and snails and was primarily a recapitulation of Stansbery (1970) except that numerous resurrected names were introduced.

Stansbery's papers (1970; 1971) need further discussion: for example, neither van der Schalie (1939) nor Isom (1968), Isom and Yokley (1968), and Isom and Yokley (1968a) were referred to in the discussion on the mussel fauna of Muscle Shoals, Alabama. The latter papers deal with the historical and present status of Cumberlandian and other endemic species of some tributaries of the lower Tennessee River. Two

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of the papers have specific references to fauna of the Muscle Shoals area. Another significant omission was the paper by Isom (1969) which was an attempt to classify objectively the causes of the decline in mussel populations of the Tennessee River and which includes records of specimot only for Kentucky Reservoir, which Stansbery discussed, but also information on Muscle Shoals.

The continued reference to Muscle Shoals, Alabama, as 'Mussel Shoals' is contrary to historical documentation (Dexter, 1961 and 1967; Isom, 1971).

Captions for figures 22 through 50 listed by Stansbery (1971) are totally inadequate since they are based on limited records. Many people are looking to these annotations and records for support in evaluating possible impact of proposed projects on mollusks. The material compiled, while a beginning, is based on such limited information that it should be considered only provisionally authoritative.

Stansbery (1971, p. 7) discussed Plethobasus cooperianus but does not include the information of Isom and Yokley (1968). While the new record of P. cooperianus from Duck River probably means little to the survival of this species, it should be noted.

Stansbery (1971) incorrectly states that unionids do not successfully reproduce in the New Johnsonville area, Kentucky Reservoir, Tennessee River. Isom (1969) re-

ported that Fusconaia ebena was successfully reproducing in the main channel of Kentucky Reservoir. Numerous other species of Unioninae have adapted to the environment of Kentucky Reservoir.

Stansbery's evaluation of the Gastropoda is extremely unsatisfactory. He indicates that there are insufficient data for evaluating species status of Physidae, Lymnaeidae, and Planorbidae which is a personal opinion since there are authoritative sources of information on these families. Further, the names applied to the Pleuroceridae are extremely confusing since, as Rosewater (1960) noted, 'It does matter which genus is called Pleurocera, because what has been called by that name has been recognized for so long and is still being used in this sense by most workers in North America. To call verrucosa and its allies Pleurocera would change a nomenclatoriallylinked generic concept of long standing..' Practical evidence for retention of Pleurocera acuta Rafinesque, 1831, as the type species of Pleurocera Rafinesque, 1818, rather than Pleurocera verrucosa Rafinesque, 1820, as Stansbery has done, isoverwhelming.

Another contributor, Stein (1971), does not give full credit for resource material used in her presentation which appears, in part, to be a review of the literature.

Clark (1971) gives an interesting account of the historical and current management of naiad populations in Ohio that will be of interest for generations. His question or conjecture about the value of dams to management of mussels on the Muskingum River in Ohio is indeed interesting.

Fikes and Tubb (1971) best summarize their article with the statement that, 'Variability in the tests is quite large and a statistical test is probably meaningless.'

Imlay (1971) incorrectly states that, 'The commercial mussel harvest from Green River in Kentucky has been ruined for many years because of petroleum brine waste.' There was some active mussel harvesting on the lower Green River in 1965, about 5 years after the problem of brine waste was

reportedly terminated. It is known from personal work in 1971 and work by Stansbery (1965) and Williams (1969) that there is a substantial and diverse mussel fauna in the lower Green River. Reduction in the number of mussels is more likely due to overharvesting than to brine waste.

Van der Schalie (personal communication) noted, with reference to Imlay's (1971) statements that Lampsilis higginsi was '... once widely distributed ...' and 'It was a valuable commercial species in Lake Pepin ....' that 'L. higginsi and L. orbiculata may be conspecific but surely neither of them is common and widely distributed ....'

In conclusion, it is my opinion and that of others, substitution of resurrected generic or specific trivial names for those long in general use is a disservice to the aim of better informing our colleagues, administrators, other non-malacologists, and the public. I think one can say that vacillation of mollusk taxonomists is a challenge to the credibility of all malacologists. In fact, because of the vacillation of our taxonomists, the information presented is of limited value to laymen who need such information for making decisions. This statement applies to taxonomists in general and is not specific to malacology. Very recent experience showed that some resurrected generic names in Stansbery (1971) have hindered synthesis of lists of endangered species. For additional arguments for conservatism in taxonomy, Cole (1941 and 1941a) and van der Schalie (1952) should be consulted.

A meeting of national stature should be held to bring together all available expertise to determine endangered mollusk species and attempt to stabilize nomenclature. A really authoritative compilation could result from such a meeting.

## LITERATURE CITED

CLARK, Clarence F. (1971) Management of naiad populations in Ohio. -- Proc. Symptore and endangered mollusks (Naiads) of the U. S., pp. 26-33.

COLE, Leon J. (1941) Each after his kind. -- Science 93(2413): 289-293.

COLE, Leon J. (1941a) Each after his own kind. -- Science 93(2414) 316-319.

DEXTER, R. W. (1961) Mussel Shoals vs. Muscle Shoals. -- Sterkiana 4: 29-31.

--- (1967) Addenda on mussel vs. muscle. -- Sterkiana 27: 1-2.

FIKES, MARTHA A. & TUBB, Bichard A. Amblema plicata as a pesticide monitor. — Proc. Symp. Rare and endangered mollusks (Naiads) of the U.S., pp. 34-37.

IMLAY, Marc (1971) Bioassay tests with naiads. -- Proc. Symp. rare and endangered mollusks (Naiads) of the U.S., pp. 38-41.

ISOM, Billy G. (1968) The naind fauna of Indian Creek. Madison County, Alabama. -- Amer. Midl. Nat. 79(2): 514-516.

--- (1969) The mussel resource of the Tennessee River. -- Malacologia 7(2-3): 397-425.

--- (1971) A biologist's look at the history of Muscle Shoals (Mussel Shoals). -- Malacol. Rev. 4: 203-206.

ISOM, B. G. & YOKLEY, P., Jr. (1968) Mussels of Bear Creek Watershed, Alabama, and Mississippi, with a discussion of the area geology. -- Amer. Midl. Nat. 79(1): 189-196.

Duck River in Tennessee, 1965. -- Amer. Midl. Nat. 80(1): 34-42.

ROSEWATER, Joseph (1960) IN: Proposed further use of the plenary powers in the case of the generic name Pleurocera Rafinesque, 1818 (Class Gastropoda). Z.N.(S.) 83 by R. V. Melville. — Bull. Zool. Nomencl. 17(6'8): 170-174.

van der SCHALIE, H. (1939) Additional notes on the Naiades (fresh-water mussels) of the lower Tennessee River. -- Amer. Midl. Nat. 22(2): 452-457.

--- (1952) An old problem in naiad nomenclature. -- Nautilus 65(3): 93-99.

STANSBERY, DAVID H. (1965) The naiad fauna of the Green River at Munfordville, Kentucky. — Amer. Malacol. Union Ann.

---(1970) 2. Eastern Freshwater Mollusks (8). The Mississippi and St. Lawrence River systems. -- Malacologia (10(1): 9-22.

water mollusks in Eastern United States - Proc. Symp. Rare and Endangered Mollusks (Naiads) of the U.S., pp. 5-18, 18u-18f.

STEIN, Carol B. (1971) Naiad life cycles: their significance in the conservation of the fauna. — Proc. Symp. Rare and Endangered Mollusks (Naiads) of the U.S., pp. 26-33.

WILLIAMS, John C. (1969) Mussel fishdry investigation Tennessee, Ohio, and Green Rivers final report. -- Ky. State Proj. No. 4-19-R. Ky. Dept. Fish. Wildl. Res., 107 pp.

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## EDITOR'S NOTE

With permission of the author of this paper, it has been shown to Dr. David H. Stansbery in case he should wish to prepare a reply for publication in this number of Sterkiana. Pressure of other duties has prevented Dr. Stansbery from doing so in time but his reply will be published in Sterkiana as soon as it is ready and space is available.

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