This Week's Citation Classic


This is a revised classification of Protozoa by a committee of experts (several now deceased), members of the Society of Protozoologists, who were aided by scientists from all over the world. Diagnoses of 141 suprafamilial taxa are included. Several major shifts have been introduced at all taxonomic levels. [The SCI® indicates that this paper has been cited over 160 times since 1964. Of these 1 occurred in 1964; 5 in 1965; 11 in 1966; 15 in 1967; 9 in 1968; 12 in 1969; 12 in 1970; 13 in 1971; 10 in 1972; 3 in 1973; 7 in 1974; 9 in 1975; 11 in 1976; 13 in 1977; 14 in 1978; 9 in 1979; 7 in 1980.]

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"It is strange that I was asked to write about the 1964 classification just after the appearance in print of 'A newly revised classification of the Protozoa.' This latter scheme, in which the Protozoa are elevated to the level of a subkingdom of the kingdom Protista, includes many changes in comparison with the 1964 classification. It was prepared by a new committee under the chairmanship of Norman D. Levine and edited by me. It seems that it takes a long time for a classification scheme to be accepted by the community of biologists. By the time a scheme, such as the 1964 one, becomes generally accepted, a new one is necessitated by advances made in fine-structural, biochemical, genetic, and immunologic studies.

"When, in the late 1950s, as a young investigator, I was asked to take over from the late R. P. Hall the chairmanship of the committee which included most of the American luminaries in the field of protozoology and among whose advisors were the outstanding authorities from all over the world, I was awed by the task ahead of me. I soon found out, however, that the most venerable members of my committee were the most understanding and helpful. Beyond taking care of the zooflagellates, which belong in my field of expertise and for whose classification I have been responsible in both the 1964 and 1980 schemes, my main task was to provide opportunities for my strong-minded colleagues to reach numerous compromises with regard to classification of the groups with which they were most familiar. Without such compromises, no scheme of classification could have been prepared. Probably no member of the 1964 committee agreed completely with the entire scheme; many undoubtedly had some reservations concerning classification of their own groups, because of the compromises they were asked to accept. Nevertheless, all agreed at the time that the 1964 taxonomic scheme was the most rational available. Its general soundness has been proved by its wide acceptance as evidenced by the frequency with which it has been cited.

"It is not often that a scientific scheme of any kind is produced by a group of experts with diverse research interests. Protozoologists, despite such diversities, have been fortunate to include investigators willing to work together and to accept many compromises. Thus they have been able twice to produce schemes of classification which, although imperfect, constitute a realistic approach to a very difficult subject and have well served biologists the world over.

"Although at this time the 1964 classification of Protozoa has been rendered obsolete, it will continue to serve as an example of a rational approach to scientific problems through collaboration of many investigators. I shall always remember with pleasure my association with all the experts and shall remain forever grateful for their help and encouragement during the many years of preparation of the 1964 report."