often obscured rather than elucidated by the sample print-outs. In trying to purify the lists by eliminating all except "operative" names, Gould is making a serious mistake. In the algae, at least, yesterday's taxonomic synonym is likely to become tomorrow's accepted name. Flowering plant taxonomy, while not as fluid, is surely not sufficiently static to guarantee a long life of usefulness for any list of accepted names. Although every name must be assigned a taxonomic position in order for retrieval to be meaningful, all names must be entered equally if the index is to serve as a universal tool. For use by specialists or regional botanists, on the other hand, the basic index may be modified and enriched by programming any amount of taxonomic opinion or other types of information desired.

A critical aspect of Gould's project is the preparation of entries for coding, as the output of a computer is only as accurate and as comprehensive as its input. Bearing in mind the enormous amount of scholarly research that has gone into the preparation of the Index Nominum Genericorum (21,000 printed cards to date) and the Index Nominum Algarum (more than 130,000 entries so far), one can see that collaboration of many taxonomists is essential if the task is to be completed. Now is the time to put our ledgers in order, once and for all, with allowance for the correction of past errors at any future time; now is also the time to establish a standardized and computerized system of bookkeeping for future additions to our vast store of taxonomic documentation. The International Bureau for Plant Taxonomy and Nomenclature at Utrecht is the logical place for centralized data processing; it must be given greater responsibility, power, and support. Gould should be commended for his self-sacrificing and persistent efforts to develop the computerized index. At the same time, it seems clear that the project would benefit greatly from constructive criticism, if such were to be offered by the community of taxonomists.

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In preparing **A Monograph of Lemnaceae** (University of Illinois Press, Urbana, 1965. 118 pp. Paper, $3.50; cloth, $4.50), the author, E. H. Daubs, presents an excellent summary of the suspected phylogeny within the family and possible relationships with other taxa. The diverse interpretations of the vegetative "frond" of the duckweeds, especially with respect to the origin of lateral pouches and their enclosed meristems, are adequately reviewed on an anatomical basis.

The author gives no indication, even in the bibliography, that this monograph is based wholly on his Ph.D. dissertation completed in 1962. In fact, the citation of abbreviations from the 1964 edition of *Index Herbariorum* creates the impression that the systematic treatment of duckweed taxa represents an up-to-date summary. Such is hardly the case in light of the chromatographic analysis of the Lemnaceae undertaken by J. W. McClure at the University of Texas and the growth-response analysis of *Spirodela* taxa undertaken by D. E. Harrison at North Carolina State University, both of which were available in thesis form prior to 1965. Furthermore, pertinent papers, published both before and after 1962, have somehow escaped inclusion in the bibliography. Thus, the data and concepts of duckweed taxonomy developed within recent years have not been considered by the author in his delineation of duckweed genera and species. We must, therefore, consider his systematic treatment in terms of the information available prior to 1962.

In this context, Daub's delineation of duckweed taxa is admirable from a typological point of view, especially since the duckweeds are extremely difficult, if not impossible, to identify from dried specimens, and it does provide an illustrated record of gross variability within the family, along with worldwide distribution data. His frequent use of quantitative (and overlapping) terminology, in keys and descriptions, does somewhat nullify the statement that " . . . identification can generally be readily made by following the keys presented herein. . . ." The following statement adds additional doubt about the accuracy of the taxonomic treatment: "These two species [*Lemna minima* and *L. valdiviana*] do, however, intergrade in form and in flowering and fruiting characteristics. . . ." Furthermore, the statement that "No one has seriously questioned the generic status of *Spirodela* since its establishment by Schleiden [1839] . . ." is certainly in error because several botanists [for example, A. R. Clapham and others, in *Flora of the British Isles* (1962), and R. W. Butcher, in *A New Illustrated British Flora* (1961)] seriously consider the genus *Lemna* to include the taxa often segregated under the genus *Spirodela.* These are matters of subjective evaluation, however, and Daubs has presented his systematic treatment of the family in a form that is more inclusive and as realistic as any presently available.

It is unfortunate that the author chose to ignore approaches to duckweed taxonomy completed between 1962 and 1965. Had brief reference to these approaches been made, even as a postscript, the reader of the 1965 monograph would not be lulled into the typological complacency so typical of this and many other monographs. At least, the reader could take with a grain of salt one of the author's " . . . more significant findings . . . [that] . . . the validity of determining species primarily on the basis of vegetative structures is examined and accepted."

Despite obvious faults, this monograph contains sufficient information on the anatomy, phylogeny, and distribution of the duckweeds, and on the literature, to be of considerable reference value to students of duckweed taxonomy.

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Nucleic Acid Research in India

The following statement is made on the flyleaf of this book, **Nucleic Acids: Structure, Biosynthesis, and Function** (Council of Scientific and Industrial Research, New Delhi, India, 1965. 372 pp., $6), " . . . the primary objectives of the symposium were to provide an opportunity for a close and informal contact between workers on nucleic acids in India and abroad; to take stock of the work being done in this field in India in the context of the extensive investigations being carried out else-