

- CUSTER, T. 1971. *Breeding biology of the Alaskan longspur*. Master's thesis, California State College, Fullerton.
- DAVIDSON, J. 1938. On the growth of the sheep population in Tasmania. *Transactions of the Royal Society of South Australia* 62: 342-346.
- ETKIN, W. 1967. *Social behavior from fish to man*. University of Chicago Press, Chicago.
- KETTLEWELL, H. B. D. 1959. Darwin's missing evidence. *Scientific American* 200 (4): 48-53.
- KLIMAS, J. 1969. A cooperative program for improving elementary science education. *American Biology Teacher* 31: 493-496.
- KUHN, D. J. 1969. A simulation game on natural selection. *Science Teacher* 36 (1): 68.
- LACK, D. 1953. Darwin's finches. *Scientific American* 188 (4): 66-72.
- WASHBURN, S. L., and I. DEVORE. 1961. The social life of baboons. *Scientific American* 204 (6): 62-71.
- WELTY, J. D. 1962. *The life of birds*. W. B. Saunders Co., Philadelphia.

## ANCIENT ALGAE HOLD SECRETS

Fossil evidence that blue-green algae much like those that exist today existed as much as two billion years ago has been found on a knoll near Eveleth, Minn. Blue-green algae are among the world's most primitive organisms; they are not much more advanced than the most primitive bacteria. Yet the Eveleth samples appear to be very similar to the blue-green algae that help clog today's eutrophying ponds. They are among the world's earliest identifiable life forms, and the Minnesota fossils, says Preston Cloud, a biogeologist at the University of California at Santa Barbara, are the oldest demonstrable examples yet found.

He said the Minnesota fossils appear to be "slightly older—probably not more than a few million or tens of millions of years," than the famous Gunflint microfossils from the north shore of Lake Superior, the oldest that could up to now be confidently identified.

"But the real significance is not the age," said Cloud, whose research is supported by the National Science Foundation and the National Aeronautics and Space Administration. "They are not all that much older than the Gunflint fossils." In contrast with the Gunflint microfossils, the fact that they are readily separable from the rock deposits in which they occur permits a comparison with living organisms with a precision and detail not heretofore possible.

If, thanks to fine detail like that seen in these fossils from the Pokegama strata in Minnesota, evolutionary changes can be detected in blue-green algae, he suggests, then perhaps they can be used to identify the relative ages of strata in which they are found.

Older microfossils have been reported; they go back some 3.2 billion years or more. But Cloud feels that those are still open to scientific question; the Pokegama and Gunflint fossils, he said, are the oldest ones that can be called relics of early life with 100% certainty.

## SUGGESTIONS FOR CONTRIBUTORS

STYLE. *American Biology Teacher* would rather receive an ill-written article containing worthwhile ideas than a stylistic masterpiece that says little: our editors can mend bad writing in a good cause. However, we do hope for clear terse prose, free of jargon. Sensible advice for writers will be found in the Conference of Biological Editors' *Style Manual for Biological Journals*, 2nd ed., published by the American Institute of Biological Sciences; and *How to Write Scientific and Technical Papers*, by Sam F. Trelease.

In matters of punctuation, enumeration, and the like we follow generally the above-mentioned C.B.E. manual and the University of Chicago *Manual of Style*. Our spellings are usually those preferred by *Webster's Third New International Dictionary* (G. & C. Merriam Co., 1965) and its abridgments.

Technical measurements are in metric, not English, units.

Avoid footnotes of any kind. References to the literature are made on-line (not by means of superscripts) within the text. If only one, two, or three works are cited, each is given in full, in the form "A. B. Smith, 1969: *Elements of Biology*, 4th ed., Jones Publishing Co., New York" for a book and "W. X. White and Y. Z. Green, 1965: 'The Inquiry Process,' *Journal of Pedagogy* 7 (2): 53-56" for an article. If four or more works are cited, they are presented at the end of the article as a bibliography arranged alphabetically by (principal) authors' last names, in the following forms for books and journals.

SMITH, A. B. 1969. *Elements of biology*, 4th ed. Jones Publishing Co., New York.

WHITE, W. X., and Y. Z. GREEN. 1965. The inquiry process. *Journal of Pedagogy* 7 (2): 53-56.

(Note that publishers' names and addresses are given and that names of periodicals are not abbreviated.) Reference to the bibliography from the text takes the parenthetical form "(Smith, 1969)"; if the same title is cited a second time this short form is repeated or, better, the reference is recast as, for example, "Smith also says. . . ." The aim is to disburden the text of apparatus—*ibid.* and its relatives. Within text or bibliography a reference may be made precise by adding, for example, "pp. 123-145" or "ch. 8." Responsibility for exact quotation lies with the writer, not the editor.

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