Comments and Communications

The Kirk Bryan Memorial Award

A GROUP of friends and professional colleagues of the late Kirk Bryan, of Harvard University, wishing to provide a fitting and enduring tribute to his accomplishments as teacher and scientist, have arranged for a Kirk Bryan Memorial Award, under the auspices of the Geological Society of America. It is hoped that this form of memorial will be representative of Professor Bryan's wide circle of friends in the different sciences, will signalize his achievements in coordinating the methods of geomorphology, geography, archaeology, soil science, and other fields in attacking common problems concerned with the Pleistocene, and will stimulate further research along the lines in which he pioneered.

The award will consist of two parts: an inscribed certificate and a cash stipend for the encouragement of research. The award is to be presented at the annual meetings of the Geological Society, at suitable intervals, to the author or authors of outstanding contributions in geomorphology or in the bordering fields in which Professor Bryan was particularly interested. The recipient of the award will be selected by a committee appointed by the Geological Society, and preference will be given to the younger men of the profession.

The award is to be based on the income from a Bryan Memorial Fund, set up within the Geological Society by contributions from Dr. Bryan's friends, former students, professional associates, and others who subscribe to the principle of the award. A three-year period is planned for the raising of sufficient funds to provide for an adequate cash stipend. It is understood that all contributions to the fund are deductible from taxable income. Contributions and pledges to the fund are now being solicited, and may be sent directly to the Geological Society of America, 419 W. 117th St., New York 27, specifically earmarked for the Bryan Memorial Fund. Other correspondence regarding the award may be addressed to the undersigned.

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Mortality and Regression of Sarcoma 180

THE Crocker Mouse Sarcoma 180 has been an excellent transplantable tumor for experimental studies for the past 37 years. Recently many small tumor screening laboratories have been set up to test compounds for antitumor activity. Some of the investigators who are new in the field of transplantable tumor work say that Sarcoma 180 has frequently regressed in their animal experiments.

During the past year, I have transplanted Sarcoma 180 into 5–10 mice at a time in order to study the regression and mortality rate. Table 1 gives a summary of the results obtained.

TABLE 1

MORTALITY AND REGRESSION OF SARCOMA 180

Death day	< 7	7–10	11–4	15–18	19–22	23–28	23–39	Total
Died	9*	16	35	30	41	9	5	145
Regressed	0	0	0	0	2	2	1	5

* These animals were infected or sick prior to being trocared.

The following suggestions are made to investigators who experience regressions with mouse Sarcoma 180:

1. The ideal weight of mice for therapeutic work is 18–22 g. Mice over 25 g in weight tend to have a slower rate of tumor growth.
2. Male mice over 5 weeks old from different cages should not be mixed, since adult males will always fight. This results in poor tumor growth, and at the same time the tumor can become contaminated from the bites of other mice.
3. Female mice are preferred, as they can be mixed with others from various cages without fighting. Pregnant females tend to have a poor tumor growth, and regressions are possible.
4. Tumor that is to be implanted should be cultured at the time of each passage. Contaminated tumors often regress.
5. Crystallized penicillin 1000 u/ml in saline solution prevents infection and also keeps the tumor moist. Streptomycin 0.01 g/ml may also be added if desired. Neither antibiotic inhibits tumor growth.
6. The larger the piece trocared, the larger the resulting tumor growth.

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Stable Nomenclature

THE demand for stability in nomenclature is a manifestation of the common yearning to maintain the *status quo*. Yet it is heard from scientists, who, of all people, should know that change is the universal rule. Mere opposition to change cannot long command respect, but is there any more valid reason for urging the stabilization of the technical names of organisms? Commonly, the underlying assumption is that if a name can be preserved in form its meaning will always be the same; but that is where hope has led judgment astray.

Taxonomy is a developing science; new characters, significant in classification, are constantly being discovered; changes occur because of alteration in views as to what a genus or a species is; and, on the whole, the concepts of today are not those of 10 or 50 years ago, much less those of 200 years ago when the foundations of present-day nomenclature were being laid.

To illustrate: In 1913 W. W. Eggleston said of *Crataegus*, "About 300 species [recognized by him] . . . The genus has been of great taxonomic interest for ten years, about 1000 species having been de-

scribed, from the United States during that period." (In M. L. Britton and A. Brown, *Illustrated Flora Northern United States, Canada . . . ,* 2nd ed., 294 [1913]). In 1935 L. H. Bailey noted that *Rubus* is "a most variable and perplexing genus, containing perhaps 400 fairly well-marked species and numberless intermediate forms. More than 3,000 species-names have been applied" (*Standard Cyclopedia of Horticulture,* 2nd ed., 3021 [1935]). And the same author, writing of *Rosa,* commented: "While some, as Bentham and Hooker, estimate the number [of species] at about 30, the French botanist Gandoger actually describes from Eu. and W. Asia alone 4,266 species" (*op. cit.,* 2981). Such splitting is not restricted to the genera mentioned; witness also *Iris, Viola,* and *Aster,* and it is not unknown in classification of the animal kingdom.

Contrast the figures cited with those for Linnaean species of those genera in 1753, which were: *Crataegus,* 9; *Rubus,* 10; and *Rosa,* 12. And consider what chance there is that a given name could have had the same content through subsequent time and all the upheavals indicated. The conclusion from this line of thought is that few, if any, names can have kept anything like the same meaning. Hence, so far as aiding in defining distribution, illustrating life history, or making any other practical use of the names is concerned, the literature would have no clearer significance than if the names had differed as often as the concepts shifted.

As names have not had the same meaning throughout their history, reliance upon a system of stable nomenclature compounds illusion. It is clear that the concepts embraced by the names may change with every revision, with every advance in taxonomic science. To have a really stable nomenclature would require a static classification—something that is both impossible and undesirable.

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On Scientific Reviewing and Writing

YOUR issue of April 18, 1952 on books is very welcome and, if I may follow the precept enunciated later, broadly sound; but there are other aspects to some of the issues raised, and these will repay discussion.

Scientific book criticism has two distinct functions that can, fortunately, be pursued simultaneously. First, the review should make clear whether the book is worth reading or buying. If the reviewer's name is well enough known in the subject, he need do little more than make a bald statement and then get on to writing about some related themes that interest him. Second, the review should discuss the subject, partly to show why the reviewer holds the views he does about the book, and partly because reading the book reviews should be a method of maintaining some acquaintance with sciences other than one's own. There is no advantage in pointing out errors in a good book; anyone capable of writing a good book will respond to a private letter in preparing a second edition. In a mediocre book it is generally worth while to explain what the deficiencies are; essentially, a mediocre book is one that would be good if it were modified a little. With a bad book errors need not be gone into in detail; the more outrageous, especially if comic, should be quoted, and that is all. The basic precept is that a review should leave the reader in no doubt whether the book is good, is marred by a few correctible defects, or stinks.

Dr. Bates suggests that reviewers should be younger, and that reviewing is a cheap, easy way to build up a library. I doubt it. However clear a review may be, its readers must take a great deal on trust, and the reputation of the reviewer matters. Furthermore, scientists not in permanent jobs naturally hesitate to be frank about a bad book by an author who is still influential. The unsigned review gets around this difficulty, but an unsigned critical review has little value unless it is very long. Expensive as books are, conscientious reading for review takes up an amount of time that, had it been spent coaching, examining, or even dishwashing, would bring in enough money for normal purchase. Thoughtful people do not review for economic motives; they have a variety of other motives—some of which may be less commendable.

The attempts of scientists to write popularly are rightly criticized by Frank Carey, but do journalists manage the business any better? Scientists use long and unusual words out of habit and thoughtlessness; journalists use them for effect. Each is wrong, but the error, as soon as it is realized, may be corrected. Slang is almost always a mistake, because it is ambiguous. A few lines back I used the word "stinks," but its ambiguity did not matter there, because all the possible meanings are suitably derogatory. But a light appearance should not be achieved at the expense of meaning, and in one or two places in his article Carey seems thus to have achieved it. The main contrast between the writing of a journalist and that of a good scientist seems to be that the former assumes only about a third of what he writes will be read. He therefore tends to use standard, easily recognized phrases instead of single words, and to repeat. The number of ideas contained in 1000 words is thus smaller than the number in a paper by a scientist. The scientist, on the other hand, tends to cover too much ground in an article and to put in too much detail. It would be better if scientists made their popular articles shorter, but the basic idea, that an article should be read rather than skimmed, is sound. If this were done, the digests would probably be put out of business, but this would not necessarily be a misfortune. The important thing is that working scientists should be encouraged to write for the general public. The effort educates the scientist, and the reader gets something different from his usual fare and something at least as good.

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