2. If a holotype (or other type material) is available but not identifiable: the name may be used for any species to which it may belong, and the allocation is to be that first proposed.
3. If there are several types, all alike and identifiable. As in II–1 above.
4. If there are several types, of different species: (a) the name is to be restricted as of the first reviser to any identifiable specimen or material; (b) or if none is identifiable, the name may be used for any species to which the diagnosis may belong, as of the first reviser.
5. If there are no types: as in II–4b, above.

Although *nomina dubia* can, as suggested here and as is generally practiced, remain forever without allocation, the proposal here put forth does jeopardize arrangements of any author (say A) who had neglected to allocate a *nomen dubium* that applies to a group of species all or some of which bear names of more recent date than the doubtful one. Another author (B) by reasonable allocation could invalidate one of A's names, and in fact would necessarily do so if the *nomina dubium* antedated all other names in the group and is otherwise available.

Recognition and allocation of *nomina dubia* is the most debatable of all procedures outlined here. Without question the entire matter of the status and treatment of them requires careful attention of taxonomists. In my suggestions I have merely followed and expanded in a seemingly logical manner the statement of Opinion 126, the only definite official discussion to date of this problem. Because of the lack of a clear ruling authors in the past have not always agreed upon allocation of *nomina dubia,* since many interpretations, all reasonable at least to some extent, are possible. Adoption of some procedure such as that outlined above would at least coordinate the actions of taxonomists, even though some might consider other procedures more useful for the greatest number of cases that may arise.

VI

The establishment of precise categories such as those suggested above may at first appear as unnecessary definitions of only academic importance. This is not so. No new concepts are suggested in these categories; they are merely concrete expressions of ideas long in common use by taxonomists but not well unified. Had the distinctions between them been made long ago, many of the difficulties encountered in the consideration of doubtful cases—either by individuals or by the commission—might well have been avoided. The existence of the concept of a *nomen clarum,* for instance, would have simplified markedly the discussion of genotypes in Opinion 65. The advantage of having categories in common use by taxonomists clearly stated, defined, limited and named, instead of hazily, incompletely or differently conceived or treated by them is beyond question a great one. While the definitions given are clearly unofficial, except for the acceptability of *nomina nuda* they reflect the opinions of the commission as revealed by study of the Code and Opinions. It is to be hoped that some official action along these lines may be forthcoming in the near future.

OBITUARY

HORACE CLARK RICHARDS

PROFESSOR RICHARDS died on May 20, 1945, in his seventy-eighth year. Since July 1, 1938, he had been emeritus professor of mathematical physics of the University of Pennsylvania. Except for two years, one spent at the Johns Hopkins University and the other at Bryn Mawr College, he had been associated with the university continuously since 1884, as undergraduate and graduate student, as Tyndale fellow in physics and as member of the staff of the department of physics. He was appointed professor of mathematical physics in 1914 and director of the Randal Morgan Laboratory in 1931.

Professor Richards's father was the first professor of architecture at the University of Pennsylvania. He designed the greenstone buildings erected on the present campus when it was established during the 1870's. The only brother of his father was an artist of distinction, whose canvases hang in America's leading galleries. Among the children of these two brothers there were three university professors, all in scientific fields, one at Columbia, one at Harvard, one at Pennsylvania, one of them a Nobel laureate.

Professor Richards was elected to the American Philosophical Society in 1907 and took an active part in its affairs until the end of his life. He contributed to its programs and served for many years as chairman of its library committee.

Early in his career Professor Richards saw that physics must reach out into ever-widening human associations. Accordingly, he took a leading part in the establishment of the Physics Club of Philadelphia in 1909. This club brings together teachers of physics in schools, colleges and universities, and physicists employed in industries of all kinds, and in laboratories connected with hospitals, schools of medicine,

dentistry and pharmacy. The club has enjoyed a continuous and vigorous existence. It is recognized as a regional chapter by the Association of Physics Teachers and as an associated society by the American Institute of Physics.

During 1918 Professor Richards served as visiting physicist at the National Bureau of Standards, working on problems of internal ballistics.

At the University of Pennsylvania he was the leader for thirty years in carrying on advanced instruction in physics, both at the graduate and the undergraduate levels. It was a heavy load, but he carried it joyously. His graduate courses on radiation and on the constitution of matter were masterpieces. He developed them early in the century and kept them up to date for more than two decades. His "Introduction to Mathematical Physics" attracted large numbers of students until the end of his teaching career. For a quarter of a century he always had students at work on optical problems. A series of studies of the optical properties of certain metallic elements and alloys was conducted under his supervision. His standards of scholarship were high and his influence upon his pupils was stimulating and lasting. All his associates developed a wholesome respect for his ideals and standards.

Professor Richards was a devoted alumnus of his college. He was keenly interested in the education of the undergraduates. He offered a series of courses for upper classmen that covered the whole field of classical physics. He gave one of these courses each semester with a thoroughness and a fidelity that won him the enduring gratitude of his pupils. He was not a lantern-slide and blackboard lecturer. His lectures were illustrated with demonstrations that required hours of preparation. He gave nature a chance to speak for herself and his pupils a chance to hear her voice.

Over a period of years Professor Richards encouraged teachers in the Philadelphia area to continue the study of physics and to work for graduate degrees in the field. The cumulative effect of his policy has been to create in the schools of the area a considerable group of teachers who hold advanced degrees in physics. To this group of people he was philosopher, guide and, above all, friend. They continued to visit him during the years of his retirement, and the hour of his funeral was set late in the afternoon to permit this group to be present.

In 1931 Professor Richards was invited to assume the directorship of the Randal Morgan Laboratory of Physics. It was not an easy assignment, for he was then in his sixty-fourth year, a depression reigned in the land, and the unrest and bewilderment abroad in the world expressed itself on his campus in cravings for "academic recognition" and in yearnings for "academic prestige." Professor Richards gave little heed to the stirrings around him, for he held with Russell Conwell that "acres of diamonds sparkle at every man's doorstep," and with S. Weir Mitchell that "the jewel Fame is found unsought along Duty's pathways." He was a modest, unassuming scholar and teacher and he had seen great honors worn with humility and dignity by some very near to him.

Professor Richards served as director of the laboratory for seven years, until he reached the age of retirement. During his last year of service pupils and other friends engaged John R. Pierce to paint his portrait. It was presented to the university at a testimonial dinner given during June, 1938. Professor Richards's response at this dinner brought editorial comment from Philadelphia's *Evening Public Ledger*. Under the title "Teacher's Secret" the *Ledger* said editorially:

> The guest of honor revealed with modest brevity his formula for successful teaching. "I always talked," he said, "as if somebody were listening." This is refreshing philosophy. . . . The teacher who talks "as if somebody were listening" is likely to have listeners and will be honored when his work is done.

This testimonial is submitted by pupils of Professor Richards.

R. DEWEES SUMMERS
WESTERN MARYLAND COLLEGE
THEODORE S. ROWLAND
NORTHEAST HIGH SCHOOL, PHILADELPHIA
E. A. ECKHARDT
GULF RESEARCH AND DEVELOPMENT COMPANY
R. C. DUNCAN
NAVAL ORDNANCE LABORATORY
THOMAS D. COPE
UNIVERSITY OF PENNSYLVANIA

DEATHS AND MEMORIALS

DR. DAVID LINN EDSALL, dean emeritus of the Harvard Medical School and of the Harvard School of Public Health, died on August 12 at the age of seventy years.

DR. HUGH CABOT, of the Mayo Clinic at Rochester, Minn., from 1930 to 1939 professor of surgery in the Graduate School of the University of Minnesota, died on August 14 at the age of seventy-three years.

DR. WILLIAM CRAMER, pathologist of the Barnard Free Skin and Cancer Hospital in St. Louis, died on August 10 at the age of sixty-seven years.

DR. ROBERT H. GODDARD, chief of Navy research on jet-propelled planes, died on August 10 at the age of sixty-two years. Dr. Goddard was formerly professor of physics and director of the laboratories of physics at Clark University.