All of the dictionaries consulted[1] agree that to dialyze a material means to subject it to the process commonly known as dialysis. In addition, Webster gives as one of the definitions of dialyze "to pass through a suitable membrane." Since dialyze comes from the Greek δια, through and λύειν, to loosen or to release, this latter meaning is in accord with the etymology of the word. It is also in accord with British and American usage.[2]

The dictionaries consulted also agree substantially that dialyzable means "capable of separation by dialysis." An adjective with this meaning is useless because it may be applied either to substances which are in "true" solution or to colloidal materials, since each may be separated from the other by dialysis. Webster, by implication only, includes in the definition of dialyzable the ability to pass through a membrane. This meaning, which is not specifically mentioned in the dictionaries cited, is the only one which is justified. It, too, is in accord with present usage[2] though there is some confusion.

The greatest contradiction exists in the definitions of dialyzate. Webster inconsistently defines the dialyzate as the material "which fails to pass through the membrane." Murray defines dialyzate as "that portion which remains after dialysis." The term *diffusate* is mentioned by these authorities as applied to the material which passes through a membrane, as opposed to the dialyzate which fails to pass through. In opposition to this view Funk and Wagnalls define dialysate "1. The compound that is to be dialyzed. 2. The crystallizable constituents of a drug freed from colloids by dialysis."

It is obvious that the word in order to be useful must designate either the material which passes through, or the material which remains in the dialyzer, and not both. From the standpoint of etymology it seems plain that the material which passes through the membrane dialyzes, is dialyzable and is therefore the dialyzate. Though the terms dialyzate and diffusate were formerly used in the sense indicated by Murray and Webster, the better usage should be unanimously adopted, whereby the term dialyzate is used to designate the material which passes through, rather than that which remains in the dialyzer. The material which remains in the dialyzer may be designated as the undialyzable residue. The word *diffusate* has no longer any use in this connection.

ROGER J. WILLIAMS

[1] Webster's New International Dictionary; Funk and Wagnalls' New Standard Dictionary; Murray's New English Dictionary.

[2] See for example Harden's "Alcoholic Fermentation," p. 57 (Longmans Green and Co.), and Mathews "Physiological Chemistry." Fourth edition, p. 393. (William Wood and Co.)

THE EDWARD CURTIS FRANKLIN FELLOWSHIP

ONE of the most distinguished and best-loved of American teachers and scholars of chemistry, Professor Edward Curtis Franklin, of Stanford University, will retire from active university service at the end of the present academic year. His students, associates and friends wish to mark this occasion by a special and enduring expression of their admiration of his achievements in chemical research and of their affection for him as teacher and friend. To this end they propose to establish an ever-living memorial to him in the form of a modestly endowed research fellowship in chemistry at Stanford University. A committee of about thirty well-known chemists and a few other friends, with Dr. Ira Remsen as honorary chairman, has been formed to collect a fund of $15,000 for this purpose. This committee is now appealing for contributions to this fund, and hopes to find general approval and support of its plan.

Franklin's career as a devoted and brilliant investigator and an inspiring teacher is well known to American chemists. He was graduated from the University of Kansas in 1888; was a student in the University of Berlin in 1890–1891; and completed his work for the doctorate under Remsen at Johns Hopkins in 1894. He began his professional work as assistant in the University of Kansas, becoming professor in 1899. He continued in this position until 1903, when he went to Stanford as associate professor. He became full professor there in 1906 and has held this position ever since.

In 1911–1913 he was chief of the division of chemistry of the U. S. Public Health Service, on leave of absence from Stanford. During the war years, 1917–1918, he was a member of the Advisory Board of the U. S. Bureau of Mines, physical chemist of the U. S. Bureau of Standards, and consulting chemist of the Ordnance Bureau of the Army. He received the honorary degree of Sc.D. from Northwestern University in 1923 and from Western Reserve in 1926. He is a member of the National Academy of Sciences and the American Philosophical Society, and was president of the American Chemical Society in 1923. In 1925 he was awarded the Nichols medal.

We provide memorials of many kinds to many men for many forms of public service. But we all too rarely express in concrete form the appreciation of our debt to such men as Franklin. The quiet, persistent and utterly devoted work of research in pure science carried on by these men is too usually overlooked by the nation and its contribution to the pub-

lic welfare too little recognized. The proposed memorial to Franklin is not to be a passive one of stone or bronze, but an active, animate one. It is to be one which will enable the fruits of his work to be plucked every year. It is the kind of memorial which he would best like.

Contributions to this memorial of any size, from the least to the largest, will be equally welcome. They should be made payable to the E. C. Franklin Fellowship Fund and sent to Professor W. H. Sloan, Stanford University P. O., California.

VERNON KELLOGG
NATIONAL RESEARCH COUNCIL

SCIENTIFIC BOOKS

A Review of the Giant Mackerel-like Fishes, Tunnies, Spearfishes and Swordfishes. With twenty plates. By DAVID STARR JORDAN and BARTON WARREN EVERMANN. California Academy of Sciences, San Francisco. 1926.

DR. JORDAN and Dr. Evermann have lately issued a memoir of interest to naturalists generally, and especially to anglers for tuna, swordfish and others of their kind, which abound at the surface in deep seas of certain favored regions. These fishes, the choicest prizes of oceanic anglers, are of many species, representing six different types, the tunas or tunnies, the albacores, the swordfish, the marlin fishes, the spearfishes and the sailfishes. These fishes are all too large for museum purposes, one of the marlins reaching a weight of 1,400 pounds. But few mounted examples or casts are in existence, these expensive and of very recent date. Hence careful studies of the species have been almost impossible. The authors of this book have examined many fresh examples in the markets of Japan and Hawaii, and among angler's trophies at Santa Catalina, but have been compelled to depend chiefly on photographs. The work in regard to distinction of species is therefore mostly tentative, but it is sufficiently detailed to show that the nomenclature hitherto accepted is mostly incorrect and nearly worthless. Except the cosmopolitan swordfish (*Xiphias gladius*) no species seems to be common to the Atlantic and Pacific, and the tropical species do not run much north of the Tropic of Cancer, those north of that line being mostly different from those found southward.

These "giant mackerels" belong to three distinct families, the Tunnies or Tunas (*Thunnidae*) with five genera, *Thunnus, Germo* (Albacore), *Parathunnus, Neothunnus* (yellow fin) and *Kishinoëlla*. The species of *Thunnus* reach 600 to 800 pounds in weight, those of the dwarf Albacore, *Kishinoëlla*, only 20 pounds.

The famous "leaping tuna" of the Santa Barbara Islands is given a new name (with some doubt), *Thunnus saliens*.

The *Istiophoridæ*, sailfishes and their relatives, have a long sharp sword, like the swordfishes, but it is slenderer and the groups differ otherwise in fins, scales and character of flesh. In this family are three well-marked genera, differing in the form of the dorsal fin. Of these, *Makaira*, with the front only of the dorsal elevated, is largest in size of individuals and most numerous in species. In the Pacific these are called marlins or marlin-spike fishes. Different species of this type are found in all warm seas.

Tetrapturus (spearfishes) has the dorsal fin of moderate and nearly uniform height throughout. No species occurs in America.

Istiophorus (sailfishes) has the dorsal fin inordinately high, bright blue with small black spots. Its species, all tropical, are perhaps swiftest of all fishes, abounding off Florida, Cape San Lucas and Southern Japan. The commonest forms are *Istiophorus volador* of the Atlantic and *Istiophorus greyi* of the eastern Pacific.

The *Xiphiidae* or swordfishes have but one species, *Xiphias gladius*, found all the world over except in the Arctic. The largest on record weighed 572 pounds.

In this memoir good illustrations are given of all the species not figured elsewhere.

The species found off our Atlantic Coast and in the West Indies are the following:

Thunnus secundodorsalis	All these perhaps the same as *Thunnus thynnus* of Europe.
Thunnus coretta	
Thunnus subulatus	
Germo alalunga	
Parathunnus obesus	
Neothunnus albacores	Perhaps the same.
Neothunnus allisoni	
Neothunnus albacora	
Makaira albida	
Makaira ampla	
Istiophorus americanus	
Istiophorus volador	
Istiophorus maguirei (perhaps young of I. volador)	
Isthiophorus wrighti.	

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SCIENTIFIC APPARATUS AND LABORATORY METHODS

AN IMPROVED CLOSING BOTTLE FOR SUB-SURFACE SAMPLING OF FLUIDS

EVER since my experience in plankton collecting in the San Joaquin River, 1912–1915, I have been