

the whole temperature range with a great variety of substances. The following are two examples, chosen not because of exceptional agreement, but because of the wide range of temperature and viscosity which they cover:

Temp.	Butyl Alcohol.		Octane.	
	$\eta_{calc.}$	$\eta_{obs.}$	$\eta_{calc.}$	$\eta_{obs.}$
0° C.	0.0523	0.0519	0.00706	0.00706
10	0.0388	0.0387	0.00616	0.00616
20	0.0293	0.0295	0.00543	0.00542
30	0.0226	0.0227	0.00482	0.00483
40	0.0177	0.0178	0.00432	0.00433
50	0.0141	0.0141	0.00390	0.00391
60	0.01135	0.01139	0.00354	0.00355
70	0.00926	0.00929	0.00323	0.00324
80	0.00765	0.00766	0.00296	0.00297
90	0.00638	0.00638	0.00273	0.00273
100	0.00538	0.00539	0.00252	0.00252
110	0.00458	0.00460	0.00234	0.00234
120	0.00219	0.00216

$\eta_{obs.}$ is taken from Landolt-Börnstein. It is doubtful if the experimental error is less than the very slight divergence between calculation and experiment.

The only general viscosity relation which I have found to provide a test for the formula is one due to A. W. Porter. This empirical relation is as follows: If two liquids be examined throughout a sufficient range of temperature, a number of temperatures T_1 can generally be found for one liquid I, at which the viscosity is the same as it is for the other liquid II at a number of temperatures T_2 . If T_1/T_2 is plotted against T_1 a straight line results. This relation follows at once from the formula given above. For if A_1 , b_1 and A_2 , b_2 are the constants for liquids I and II, then

$$A_1 e^{b_1/T_1} = A_2 e^{b_2/T_2}$$

$\therefore \log A_1/A_2 = \text{constant for the two liquids concerned}$
 $= b_2/T_2 - b_1/T_1$

$$\text{or } T_1/T_2 = a + \beta T_1$$

where a and β are constants, which is the experimental relation.

Water, as would be expected, and other associating liquids, demand a further constant for complete representation, but the application of the formula in the region within which it is valid, namely at high temperature, has led to interesting results, to be detailed in a forthcoming publication.

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Botanical Nomenclature.

THE letter from Mr. R. A. Inglis in NATURE of Feb. 8, p. 204, calls for a reply, and the following is sent on behalf of the British Sub-Committee on Nomenclature, which has since 1923 been engaged in examining proposals for the revision of the International Rules of Botanical Nomenclature. Mr. Inglis is mistaken in supposing that Art. 57 is concerned with anything other than spelling. The only Article which bears, even indirectly, on gender is Article 7, which states—albeit erroneously—that “Scientific names are in Latin for all groups”. It follows that they are subject to the rules of Latin grammar, and that adjectival specific epithets necessarily agree in gender with the generic names to which they are attached. The only problem is the correct gender of certain generic names. The real difficulty lies in the fact that Latin as used in botany has changed *continuously* from classical times down to the present, and

that the same name, for example, *Atriplex*, may have had more than one gender even in ancient Rome. It seemed to the Sub-Committee that an Article dealing specifically with the gender of generic names was required, and the following new Article has been submitted by them, along with other proposals, for the consideration of the International Botanical Congress (1930).

“The gender of generic names is governed by the following regulations:

“I. A Greek or Latin word adopted as a generic name normally retains its classical or medieval gender, even if the author who published it gave it a different gender. Where, however, the classical or medieval gender varies, or is in dispute, or where it differs from the gender usually ascribed to the generic name, the gender of the latter shall be fixed by the Advisory Committee.

“II. Generic names which are modern compounds formed from two or more Greek or Latin words take the gender of the last. If the termination is altered, however, the gender will follow it.

“III. Arbitrarily-formed generic names, or vernacular names used as generic names, take the gender assigned to them by their authors. Where the original author has failed to indicate the gender, the next subsequent author has the right of choice.”

Under II, *Airosperma* is neuter, as urged by Mr. Inglis, but *Polygala*, being feminine to Pliny as well as to Linnæus, should, we think, remain feminine (under I).

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(Convener, British Sub-Committee on Nomenclature).

Royal Botanic Gardens,
Kew, Feb. 14.

Research and the State.

I HAVE read with great interest in NATURE of Nov. 23, 1929, Sir Walter Fletcher's lecture on medical research and on the inadequate rewards for such essential activities. There are apparently three kinds of activities to be considered.

1. The research worker who, if he is one of the best type, has the spirit of inquiry in him. He is often quite indifferent to practical results. Such people are not too numerous and should be given a free hand.

2. The educated publicity agent who makes knowledge available. The late Prof. Huxley probably represented the greatest man of this type the world has seen.

3. The practitioners who adapt their methods to the knowledge gained.

All these groups seem to me to be equally important from the social point of view.

In common with many associates I regard research conducted by permanent officials as apt to become relatively sterile. Skeleton organisations and institutions for research are a necessity. The ideal, however, is surely to have a fund available, and when a research worker presents a proposal really worth investigating he can be treated generously until the work is finished.

Research as a profession will, I am afraid, tend to end in mediocrity and useful compilations. I am writing, however, chiefly to ask Sir Walter Fletcher how he proposes to influence the public, which, after all, find the money. It is certain that the Anglo-Saxon will not act until he understands the objective. It is no use presenting to him pages of mathematical formulæ and the like, interesting and useful as they are to a limited circle.

In some of the American universities an official editor makes it his business to let each part of the university know what the other departments are doing, and to let all the citizens of the State obtain the