climax, the *piceetum*. In other words, it is true *aceretum* if the climax elements are still dominant, in number of species and in abundance of individuals. This seems to be the case for the Gaspé stands of deciduous forest.

Second is vitality. Do these aforementioned elements tend to complete their cycle and development? With as great relative success as in the optimal area? Again this is so in the Gaspé *aceretum*.

A third factor, of more delicate interpretation, owing to the lack of available data, is the possible position of climax associations as pre-climax or post-climax outside their optimum range, as suggested by Cain[11] and Potzger and Friesner[12] in relation to *quercetum* and *aceretum* in Indiana. It is not unlikely that in Quebec stands of "lake forest," for instance, on the sandy soils at the mouth of the Richelieu, are pre-climax to the maple grove or possibly even sub-climax. It may be that deciduous forest in Gaspé is pre-climax to the more generalized spruce-fir (*piceetum*). The southernmost islands of taiga mentioned above might also be considered as post-climax, since they are—under a scarcely modified form—sub-climax farther south, in the hydrosere.

Surely the southern edge of the laurentian shield presents a fairly complex vegetational pattern. It has most often been considered an "ecotone." However, to one who is familiar with that pattern, it appears much more as a mosaic of associations than of species. What is meant here is that, for instance, the deciduous forest and the Canadian forest on their points of contact may interfinger over fairly large areas, but in any given stand, each community remains distinct: the species themselves do not ordinarily mingle. That is also true, although to a lesser degree, of the later seral stages. For instance, white pine and hemlock seldom if ever occur on the climax site of spruce-fir forest, as they are subclimax to the deciduous forest.

In any case, it seems doubtful here if the designations pre-climax and post-climax will serve any useful purpose if two climaxes interpenetrate over an area several hundred miles wide. It may be better to recognize the permanence of two separate climaxes over a varied topography that allows, however, of no physiographic evolution rapid enough to overcome climatic change itself.

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THE GENERIC NAME OF THE SAND FLY

IN his statement published in SCIENCE for April 28, 1944, your correspondent, W. F. Rapp, Jr., has completely overlooked the reason for the emended spelling, *Phlebotomus,* commonly applied to the sand flies, otherwise known as *Flebotomus*. All codes of nomenclature provide, of course, that the spelling of every generic name be that used by the author in his original publication where the name was first proposed. Specific exception is made, however, where it is evident that the original spelling includes a typographical error and permission is given to correct such mistakes in later publications.

Rondani used *Flebotomus* in designating the genus in 1840, but the derivation of the name is so obvious (from φλερός, vein and τομή, cutting) that Agassiz and most later zoologists have emended the spelling to *Phlebotomus,* using the corrected Latinized form. Thus, the change has been made to correct a very evident typographical error, and not for reasons unknown, nor "to make it easier to pronounce," as suggested by Dr. Rapp. A further reason to invoke the provision of the code concerning the correction of typographical errors lies in the common and long-standing use of the combining form *phlebo-* in a series of common medical terms referring to veins, blood, blood-letting, etc. Also the term phlebotomic or its close counterpart is regularly applied to the blood-sucking insects in English and in the other more widely used European languages.

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ISOLATION OF ERGOSTEROL FROM PENICILLIUM NOTATUM

DURING the course of the determination of the hydrocarbon content of plants as part of work on the origin of petroleum,[1] we have studied *Penicillium notatum,* grown for the production of penicillin. The non-saponifiable matter from a butanol extract of the wet mycelium produced an easily purified sterol which has the distinctive properties of ergosterol; m.p. 160–162°, $[\alpha]^{25}_{D}$ −126[2a]. Acetate, m.p. 171–174°, $[\alpha]^{25}_{D}$ −90[2b]. Benzoate, m.p. 165–167°, $[\alpha]^{25}_{D}$ −64[2c]. The amount of ergosterol isolated approximated 1 per cent. of the dry weight of the mycelium, although maximum recovery was not attempted. Ergosterol has been isolated from yeast, ergot and a variety of fungi. It will be recalled that the irradiation of ergosterol yields vitamin D_2, calciferol.

We wish to thank the Department of Bacteriology of the School of Agriculture and the War Production Board Penicillin Project for the material studied.

[11] S. A. Cain, *Am. Midl. Nat.*, 21: 146–181, 1939.
[12] Potzger and Friesner, *l.c.*

[1] American Petroleum Institute Research Project 43b.
[2] (a) Purified hydrated ergosterol melts at 160–163°, $[\alpha]^{20}_{D}$ −128.7, Callow, *Biochem. Jour.*, 25: 79, 1931. (b) Acetate, m.p. 179–180°, $[\alpha]^{25}_{D}$ −90, Bills and Honeywell, *Jour. Biol. Chem.*, 80: 15, 1928. (c) Benzoate, m.p. 168–170°, $[\alpha]^{23}_{D}$ −70.5, Wieland and Asano, *Ann.*, 473: 300, 1929.